

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

ALBIHNS PATENTBYRA GÖTEBORG AB
Box 142
S-401 22 Göteborg
SUEDE

PRIST	DATUM
SSR	01.07.31

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 71.1)

Date of mailing
(day/month/year) 06.07.2001

Applicant's or agent's file reference
111433 AM

IMPORTANT NOTIFICATION

International application No.
PCT/SE00/00565

International filing date (day/month/year)
23/03/2000

Priority date (day/month/year)
24/03/1999

Applicant
WEBGIRO AB

BEST AVAILABLE COPY

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/

 European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized officer

ANDREATTA, R

Tel. +49 89 2399-7581



INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 00/00565

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: G06F 17/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4713780 A (THOMAS G. SCHULTZ ET AL), 15 December 1987 (15.12.87) --	1-10
A	WO 96/24104 A1 (FERAG AG), 8 August 1996 (08.08.96) -----	1-10

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"I" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

26 June 2000

Date of mailing of the international search report

20-07-2000

Name and mailing address of the ISA /

Swedish Patent Office
Box 5055, S-102 42 STOCKHOLM

Facsimile No. +46 8 666 02 86

Authorized officer

JAN SILFVERLING/EE

Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

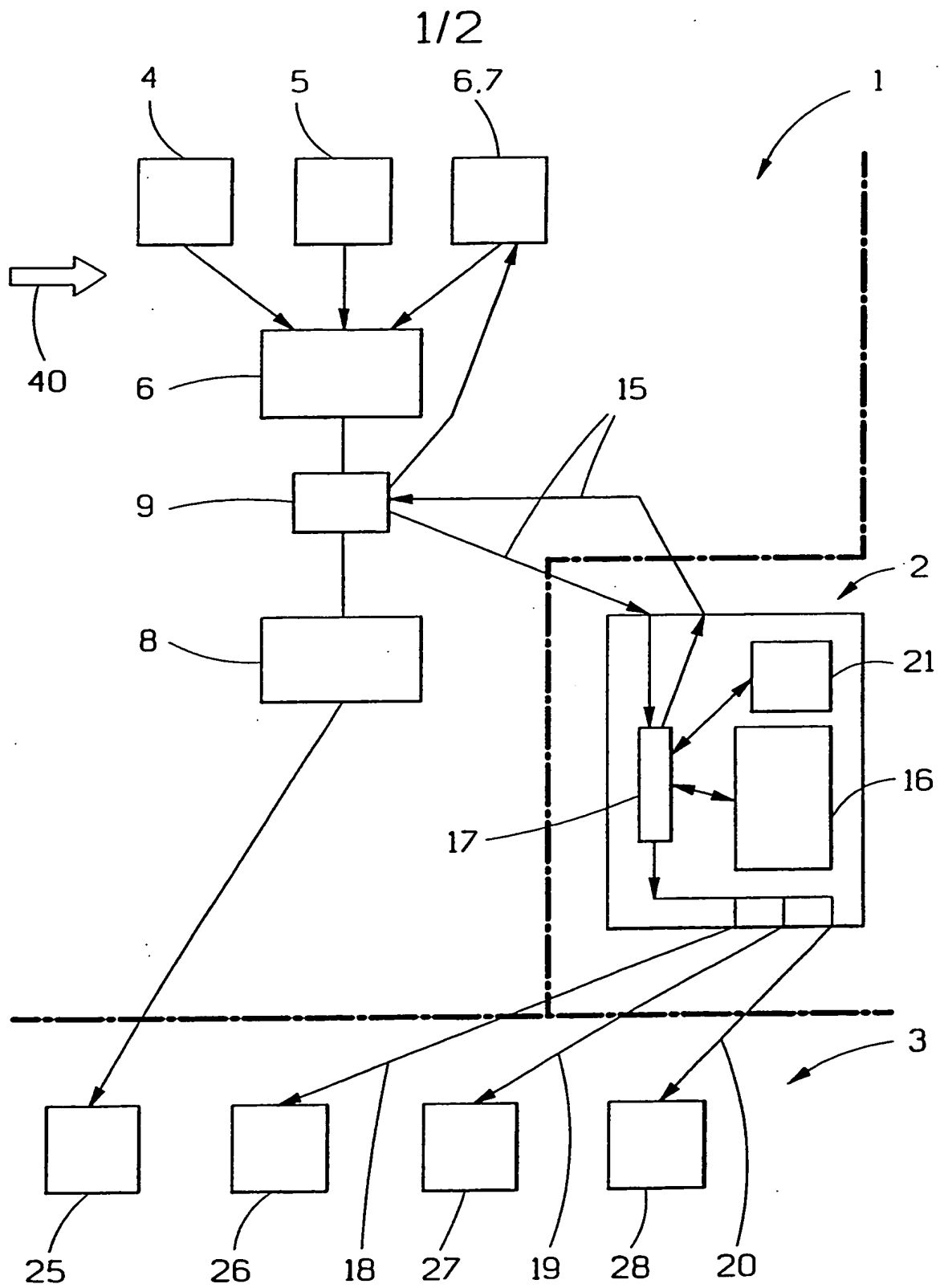
Information on patent family members

02/12/99

International application No.

PCT/SE 00/00565

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4713780 A	15/12/87	NONE	
WO 96/24104 A1	08/08/96	NONE	



2/2

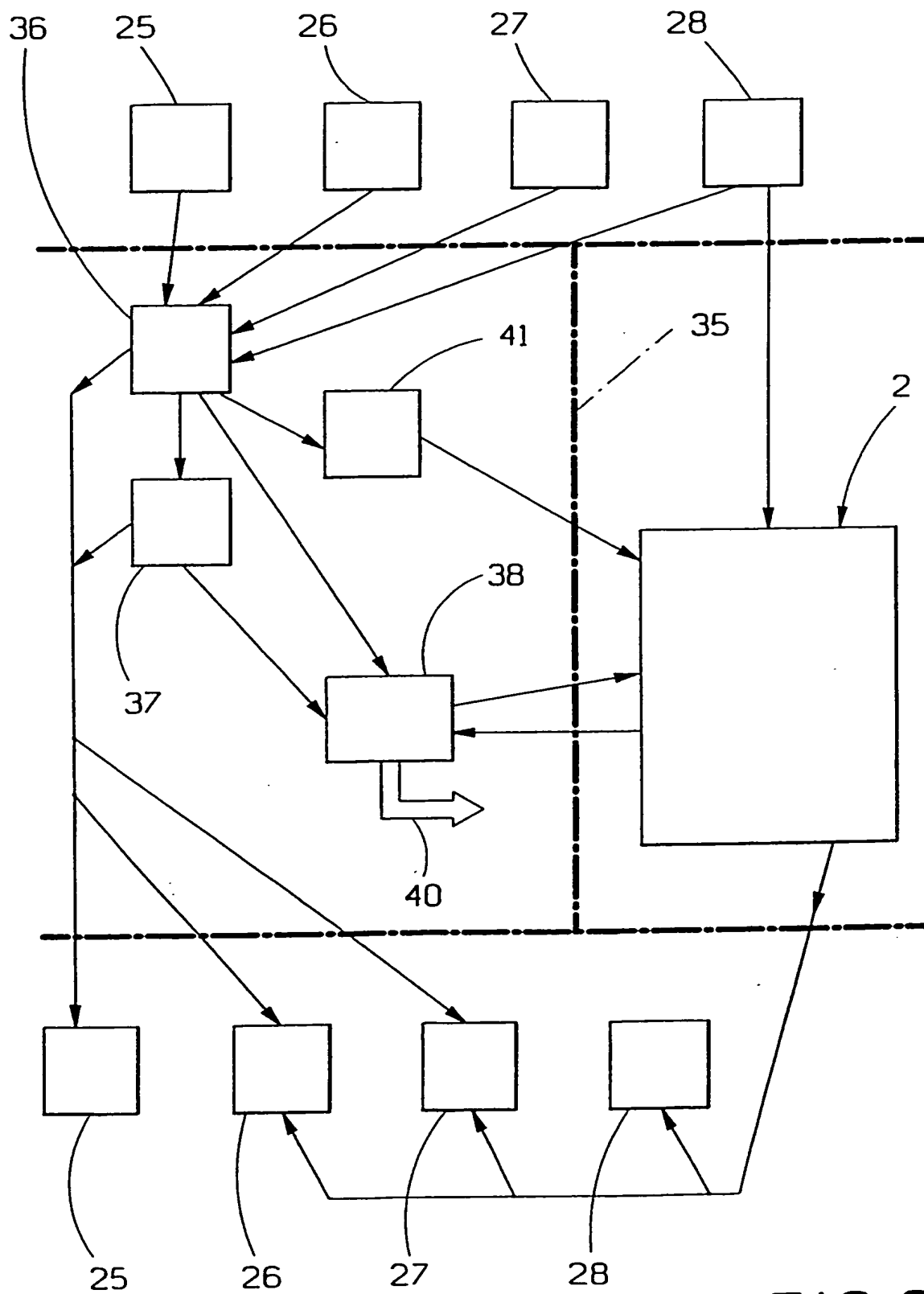


FIG.2

REPLACED BY
ART 34 AMEND
WO 00/57322

2/12/01 TS

PCT/SE00/00565

09/937259

- 5 A method for computer controlled distribution of information over a number of different communication systems and a system for the accomplishment of the method.

TECHNICAL FIELD:

- 10 This invention relates to a method for computer-controlled distribution of information via a number of different communication systems and system for the application of the method.

CURRENT TECHNOLOGY:

- 15 For the transmission of document information between different parties such as between different companies or between companies and private individuals, there are principally two distribution systems available, namely via letter post and via electronic document
- 20 transmission such as via fax or e-mail. Particularly within the business community there is a desire to limit the use of letter post as much as possible as it results in extensive paper handling and consumption of paper, not only for documents but also for envelopes.
- 25 At the same time postal charges are high and the postal service relatively slow and sometimes rather unreliable. By the use of fax, paper handling is reduced and the information reaches the recipient very quickly. In addition the sender can obtain confirmation
- 30 that the information has arrived. E-mail offers even greater benefits. To a certain extent the transmission of information can take place completely without the use of paper, if the information is written to computer memory on the premises of the sender and transferred
- 35 and read off on the recipient's computer monitor, enabling the recipient to decide whether the message is to be stored electronically, on paper, or not stored at all. An advantage unique to e-mail is that the

electronically-stored information can be used by both the sender and the recipient for editing, for transferring completely or in part to a store or to working files so that it can be used for data
5 processing.

In spite of the fact that electronic communication has many considerable advantages compared to letter post, the latter is still used to a great extent,
10 particularly for private mail as is to be expected but also for outgoing mail from companies which, however, usually have the equipment available for electronic communication.

15 There are several reasons for electronic communication being used to a limited extent in spite of the equipment being available. There will probably always be documents which are only suitable for physical conveyance, in particular original material such as
20 signed legal documents and also material with a large volume, such as books and other extensive printed material. One reason which should, however, be able to be largely eliminated is the uncertainty on the part of the sender as to whether the recipient has the
25 facilities to receive and handle electronically transmitted information and if so by what means and to what address. On the other hand practically every imaginable contact has a known postal address, which means that the postal service is used as a necessity
30 for much correspondence. For example, authorities and institutions such as banks regularly use the postal services for messages, injunctions, transaction confirmations, account communications and in particular for invoices. In spite of all its advantages, the
35 relatively widespread use of electronic communication is limited to messages between companies and other parties between which there is close interaction and a frequent exchange of information.

It is therefore the case that within companies, institutions and authorities great gains could be made if the postal service was to be replaced by electronic communication whenever it was possible to do so. The gains would not just lie in the actual service being rationalized and having the least possible manual involvement but also in the information being able to be produced by the sender in a considerably more rational way than when using the postal service and in particular in the fact that it would be able to be used by the recipient directly as an input for further processing and storage whereas paper documents must often be transferred manually into a digital form before they can be worked on. This is particularly marked where accounting is concerned, as most companies today do their bookkeeping, ledger entries and financial reports by means of data processing using computers. It is therefore necessary for paper documents such as invoices, bank statements, etc, to be entered manually in order to be integrated in the data processing.

DESCRIPTION OF THE INVENTION:

This invention concerns a method for computer-controlled selection of distribution paths for information of various kinds produced on the premises of a sender in such a way that the best available distribution path is selected. The invention also concerns a communication and process system for the implementation of the method.

The intended information is produced in data form on the premises of the sender and transferred to a "distribution exchange", which independently analyses the information with respect to the reception address and type, and on the basis of the analysis selects the best communication path to be used and thereafter is

responsible for the distribution. The method and the system for its implementation create many opportunities both on the premises of the sender and recipient for high-level rationalization of the production and
5 further processing of the information.

Another important advantage of the invention is that it provides a high level of security against incorrect processing of the data, both on the premises of the
10 sender and of the recipient. Similarly, high security is achieved against incorrect addressing and against siphoning off of information to unauthorized parties.

An additional and very important advantage is that the
15 system can be introduced and utilized on the premises of the user without requiring any extensive installation work, and much of the work in the form of entering basic data, utilizing new computer programs and training of personnel can be eliminated by use of
20 the method and system according to the invention.

DESCRIPTION OF THE FIGURES:

In the following the method and system according to the invention will be described with reference to the
25 attached drawings which show the system diagrammatically.

Figure 1 shows a block diagram of the system regarding its function for production and distribution of information on the premises of the sender;
30 and

Figure 2 shows a corresponding block diagram regarding the function of the system for the reception of information.

35

PREFERRED EMBODIMENTS

In the following the method and system are described in a mode of application aimed initially for accounting

information with associated correspondence within a company or institution. Below are listed the most important processes and the documents associated with these within such accounting.

5

I. The debiting procedure

1. Production of basic debiting data on the basis of recorded deliveries, work carried out, etc
- 10 2. Determination of debiting data
 - a) addressee
 - b) specification
 - c) amount
 - d) terms
- 15 3. Internal recording of debiting data for the drawing up of:
 - a) ledgers
 - b) payment follow-up
 - c) financial reporting
- 20 4. Production of invoices in the form determined by the method of distribution (see 5 below)
5. Distribution of invoices in accordance with any of the methods:
 - a) the postal services
 - 25 b) by fax
 - c) by e-mail via printer on the premises of the recipient
 - d) direct electronic transmission of data to the data system on the premises of the recipient in accordance with the
 - 30 agreed addressing

II. The reception process

1. Arrival of invoice/invoicing data via:
 - a) the postal services
 - 35 b) fax
 - c) e-mail via printer

- d) direct input of data into the recipient's data system in accordance with the agreed addressing
- 2. Sorting of correspondence by content such as:
 - 5 a) payment instructions, for example invoices, demands for fees
 - b) reporting of financial data concerning payments made, payments received, balances, etc
 - 10 c) other finance-related correspondence, for example queries concerning invoices issued, requests for quotes, orders, messages concerning payment difficulties
 - d) 15 correspondence not related to finances which is to result in action, for example injunctions and demands from the authorities or other correspondence with a fixed reply deadline
 - e) 20 correspondence not related to finances, of a general and informative nature
- 3. Internal distribution of incoming correspondence in accordance with its classification (II.2 a-e)
Classification in accordance with (2)
 - 25 a,b) To be recorded as financial data in the internal accounting system which is assumed to be computer-based
 - c) to be distributed internally to the department/person responsible for the sector to which the matter is related
 - 30 d) the deadline is to be noted and the communication is to be distributed to the responsible party within the sector to which the action refers
 - 35 e) messages with possible relevance to the current business activity are to be distributed to the departments/persons

- 7 -

concerned, for information and possible action.

5 As can be seen, after sorting, the finance-related
correspondence (2a, b) can be recorded in the
recipient's computer-based accounting system and
results in relatively little manual processing.
Other correspondence (2c, d, e) can not be
10 rationalized to the same extent, but practically
always requires personal consideration and action.
However, computer-based tools such as checking and
memory functions, word-processing, etc, can be
used.

15 III. Processes brought about by the incoming
correspondence

1. Payment processes, which after the arrival of
the invoice or other payment demand has been
20 recorded in a computer-based accounting
system can be paid automatically via a bank,
bank giro or postal giro by means of correct
programming
2. Financial reporting which for a well-
developed computer-based accounting system
25 can be produced by means of a suitable
computer program.
3. Following up of financial reports after
examination. Can result in the redistribution
of funds, taking up or payment of loans,
30 reorganization of certain business activities
and other measures which in general fall
under the area of responsibility of the
management. Computer-based tools can only be
used to a limited extent.
- 35 4. Correspondence not related to finance.
Financial management controlled by computer
can only be used for certain activities with
well-established routines which are used

frequently. However, in general there is a need for computer-based tools.

As shown by the above list there are great
5 opportunities to rationalize the debiting
procedure (I) by means of computer-based data
processing. The first precondition for this it
that the sender has access to a computer-based
10 accounting system and computer programs for the
requisite processes. This is the case for large
companies and to an ever increasing extent also
for smaller companies, and is always the case for
companies and institutions with extensive
15 financial management tasks, such as banks,
insurance companies and certain authorities.
However, the distribution (I.5) of invoices and
other payment demands has not been fully
rationalized as there is a dependence upon the
20 reception capabilities of the recipient and the
sender's knowledge of these. For received
correspondence (II) there is similarly a dependence
upon the correspondence medium used by the sender
and, as mentioned, a sender will often not use the
25 most rational distribution channel due to
uncertainty regarding the available means of
distribution. This means of course that the form
of the received correspondence is determined by
this uncertainty. If the distribution takes place
30 in a less rational way which is not based on
electronic methods, this also has an adverse
effect on the opportunities for rationalizing the
sorting (II.2) and also affects the recording in
the computer-based accounting system (II.3,a and
35 b), so that there must be manual involvement. When
recording in the accounting system has been
carried out, the subsequent accounting measures
(III.1, 2) can be carried out rationally if the
accounting system is designed for this.

Accounting within companies and institutions is intrinsically well suited to computer-aided rationalization, which is also shown by the fact that
5 such rationalization has been introduced relatively quickly and widely within the financial sector. As can be seen from the above, the main obstacle to optimal rationalization is the lack of rationalization of the distribution of the finance-related correspondence.
10 Another obstacle particularly related to smaller companies is a lack of investment funds and time for the setting up of a well-developed accounting system.

Even though accounting has been mentioned as an area
15 well-suited to the utilization of the invention, this does not exclude there being other areas where repeated routines occur. Examples of such areas are the booking of tickets and ordering of goods.

20 Other sent and received correspondence which is not based on set repeatable routines such as those relating to accounting does not provide the same opportunities for rationalization but requires a considerable degree of personal decision-taking and action. Here it will
25 largely continue to be necessary to be satisfied with utilizing the available tools in the rationalization process, such as computer-based information systems, computer-based management tools, etc. However, even here an important rationalization factor can be the
30 fact that rational distribution is utilized. This is carried out to an ever increasing extent by fax and e-mail. However, here the restrictions also apply originating from the fact that it is not known what reception options the recipient has, for which reason
35 the expensive and slow postal services must be used.

In the following the system according to the invention and the method in connection with this for the

- 10 -

implementation of debiting procedures will be described. Reference is made first to the block diagram in Figure 1.

- 5 This depicts a system comprising three main parts: the sending party's subsystem 1 (above and to the left of the dotted line in the figure), an external service unit, in the following called the database 2 (to the right of the dotted line) and the recipient's subsystem
- 10 3 (below the dotted line). The subsystem 1 comprises one or more units for which the following definitions apply: computer 4, scanner 5, server 6 including requisite memory units, accounting system 7, printer 8, control unit 9 for correspondence and its distribution.
- 15 Within the sender's subsystem 1 there can be several of these units. Some units can be omitted, while other types of unit for data processing and storage can be included. However, it is necessary for there to be units for entering electronic data into the control
- 20 unit 9 and at least one printer 8 connected to this. Concerning the accounting system 7, this can be designated as a function within the system and does not need to be regarded as a separate hardware unit but can be integrated into the rest of the data processing
- 25 system. In this case the function is to comprise the ability to enter financial data, storage and processing of this and output of the data which is produced from the entered material by means of the data processing.
- 30 The database 2 is intended to comprise a service unit which can be used by several subsystems 1 on the premises of the companies and institutions. The database is connected to control units in the connected subsystems via connections 15, which can be cable links
- 35 or wireless connections and preferably a connection via some available data network.

- 11 -

The database 2 comprises a data register 16 with an advanced search function for searching and extracting data from a large quantity of stored data. A connection unit 17 is connected to the incoming connection 15 from the subsystem 1 and to the data register 16 and also to outgoing connections 18, 19 and 20. In addition it is assumed that the connection unit is connected to one or more computers 21 with monitors and keyboards for human interface.

10

The sender's subsystem 1 and the database are designed for communication to a number of recipients, which in the figure are represented by the subsystem 3. These recipient systems can have different equipment for the reception of correspondence. The different reception units which can occur are represented in Figure 1 by the following definitions: incoming postbox 25 for postal correspondence, fax machine 26, printer 27 connected to a computer for the reception of e-mail, and a data storage and data processing unit 28 for the reception of data in accordance with special addressing and activation codifying. Different recipient systems can therefore have a greater or lesser extent, from the case where it is only possible to use the postal services for document-based communication which is to be registered, to the case where there is a comprehensively developed system with special addressing and activation functions in unit 28. Examples of such functions are transfers between accounts in different banks where a codified remote message triggers the transactions with account entry and subsequent confirmation operations. The different extent of the subsystems 3 on the premises of the respective prospective recipients is the reason for the abovementioned uncertainty regarding which means of distribution can be used by the user.

35

As mentioned, the database is connected to the control unit 9, which in turn is connected for the reception of data produced in the user system's data system and arranged to control the printer 8. The control unit 9 is thereby arranged to transmit the received information via the line 15 to the control unit 17 of the database 2 during breaks in the transmission of this data to the printer. The transmission to the database initiates a search process in the register unit 16. This is arranged to search for correspondences for the addressee identifications included in data obtained from the control unit 9, in particular name and address information, and if these do not contain relevant electronic address information, to search for such information.

The process described can result either in a relevant electronic address being found from the identification data obtained from the control unit 9 or by the search process, or in no such data being found. If there is an electronic address the database takes over the forwarding, which is carried out electronically via the addressable data system 28, e-mail 27 or fax 26 in that order of priority. If no electronic address can be found, the received data is returned to the control unit 9 and forwarded to the printer 8, which is activated to print out the corresponding document for delivery by post.

Directory information in the database can be obtained from a number of media such as telephone directories, fax directories, e-mail directories, official directories, etc., which generally are available in digital form, often via CD-ROM. As far as possible each address is supplemented with its address(es) for electronic communication: electronic addressing unit 28 with its codes, e-mail address or fax number.

If no useable electronic address can be found, distribution to the incoming postbox 25 must take place from the sender system's printer 8 via the normal postal service. In other words, the correspondence in question must be printed out using the printer 8 and sent to the recipient by post as a letter. Other communication to the recipient, which is electronic, is sent as mentioned via the database 2. Accordingly the fax 26 is shown connected to the connection unit 17 of the database by the line 18 via the printer-computer 27 by the line 19 and to the addressable computer system 28 by the line 20. Like the connection 15 these connections can be via cable or wireless and preferably by means of some established data network.

In the function for the intended debiting procedure the control unit 9 constitutes a key element for the implementation of the method according to the invention. It is connected to the server 6 for the reception of data in such a form that it can control the printer 8 for the printing out of documents. Such documents are assumed here to be invoices or other payment demands, which are produced in the sender's subsystem 1. Such production can be implemented in various ways: by manual entry of data via the computer 4, by scanning of documents in the scanner 5 and/or by obtaining it from the accounting system 7. Sources of data to be entered in the accounting system can be of various kinds, such as delivery notes, work reports and incoming debits from sub-suppliers, which in turn can already be recorded in a form suitable for entry and can have been produced in the computer or scanner, for example. In addition the control unit 9 is connected to the printer 8 for the production of documents in such a form that they can be sent by post. As mentioned, the control unit is connected to the database 2 and its connection unit 17 by means of the connection 15.

- 14 -

For a debiting procedure the following operations are carried out:

Entered data from the server to the control unit 9 is forwarded via the connection 15 to the database 2 during a temporary break in the connection from the control unit 9 to the printer 8. After entry, addressing data incorporated in the produced and transmitted data quantity is sent to the data register 16 for activation of its search function. The data which is found in the register comprises name and address information for the circle of addressees within the territory which is covered by the agreed service via the database 2. If any electronic addressing capabilities are found for the recipients in question during the searching this is selected with prioritizing of the connection via the addressable unit 28 and thereafter via e-mail and finally by fax. If any of these capabilities are available the database 2 produces from the quantity of data received from the control unit 9 an invoice for the electronic distribution which has been decided upon. The abovementioned data is supplemented by already entered data from the sender for printing out a complete invoice with the sender's logo, etc. In addition it is assumed that text will be included which provides information to the effect that the communication corresponds to the sending of an original invoice and that there will be no delivery by post.

30

A precondition for this operation being able to be carried out is that an electronic address for the recipient in question is found by the search. As, if such is the case, the electronically transmitted invoice is to replace the postal service, the control unit ensures that no data is supplied to the printer 8 so that no postal delivery takes place. However, if no electronic address is found by the search, the data

35

- 15 -

quantity is returned to the control unit for forwarding to the printer 8. The document thus produced is handled in the normal way for postal delivery. Finally a report is sent from the database to the sender's accounting system 7 stating that the invoice has been sent and which communication medium was used.

This use of the method using the control unit and the database is given as an example of the use for debiting. There is, however, no reason why it cannot be used for other correspondence, for example for follow-up measures to debiting, such as reminders and dunning letters. However, it can also be used for other correspondence where the sender cannot immediately find which distribution paths are available and where electronic transmission is preferable to the postal service.

Within the scope of the invention it is also the case that the control unit 9 can be extended to include additional functions. An example of such a function is that it is equipped for the programming of particular functions. For example, it is possible for the printer 8 only to be used temporarily for a certain function, for example invoicing, and otherwise to have a more general use. For this it is expedient for there to be a program which is activated so that the abovementioned function of the control unit can be put into effect, that is alternative production of printed communication or electronic communication via the database 2. When this program is not activated the printer is connected directly to the server or other unit in the sender's subsystem for normal printer applications. If, however, the abovementioned program is put into effect, this can also comprise the abovementioned supplementary data for creating a document in those instances when it is preferred to transmit the company logo or other information for printing out by the printer instead of

using pre-printed headed paper or forms. As mentioned, it is assumed that such supplementary data will be able to be entered in the database but it can also be found in a data program for activation of the printer by means of the control unit. Activation of the control unit will also mean that the abovementioned reporting function and updating of the accounting system 7 are maintained in the event of invoicing and other accounting measures.

10

Activation of the programs which it is wished to use in the sender's subsystem can of course be carried out by command via, for example, the computer 4 or via a keyboard connected directly to the control unit. Another way is to connect in a diskette or CD-ROM containing the program in question. A further possibility which is also envisaged, is to provide the control unit or a unit connected to this with a card reader. Using cards from which the program can be read off or activated from a memory, the required function can be ensured by reading the relevant cards. The cards can be clearly marked so that no errors occur, which is important particularly in connection with accounting. The cards can also be distributed only to authorized personnel, so that misuse, for example fraudulent debiting, can be prevented.

Figure 2 shows in greater detail how received correspondence can be handled according to the method in a subsystem 35 on the premises of the recipient (between and to the left of the dotted lines). Above the upper dotted line there are the distribution methods 25-28 as shown in figure 1 and which here symbolize the paths for the correspondence coming to the subsystem 35. Below the lower dotted line are the same distribution methods 25-28 but here symbolizing the paths for outgoing correspondence, which is occasioned by the respective incoming correspondence.

- 17 -

To the right of the dotted vertical line is the database 2. The subsystem 1 for outgoing correspondence is indicated by a box outlined by dotted lines. It can be assumed that most of the users of the method and the system will have the need to be able both to send and receive correspondence. Here separate systems are described for these functions but in practice it can be expected that they will be integrated with each other to form a complete correspondence system which can be designated 1,35.

The units incorporated in the subsystem 35 can be defined in the following way: a sorting station 36 to which postal correspondence 25, fax messages 26 and e-mails 27 are directed. The incoming material is then sorted, which can be assumed to be carried out manually, into mail that is to be processed by some employee, see the box 37, and mail where the data it contains can be entered via, for example, a computer into a server 38 for the storage of data for processing internally. Such data can, for example, be information from incoming invoices which is recorded manually. Such data can also arrive at the server 38 from employees, box 37.

Electronically addressable data, box 28, is assumed to be entered in the server for data processing directly, without going via the sorting station 36. As indicated by the arrow 40 it is assumed that the server 38 is connected to the subsystem 1 for the production and dispatch of correspondence, cf. the situation in figure 1. It is therefore possible for the server functions for 6 and 38 to be processed and stored in the same unit.

What has been described so far concerns the purely internal handling. If, however, the database 2 is also used for handling incoming data, the sorting station 36

is to be connected to the database 2 directly or via a scanner 41. At least to a certain extent addressable messages are thereby also taken via the distribution path 28 to the database 2 for transmission via this to the server. Employees, box 37, are also connected to the database directly or possibly also via a scanner. The database 2 is preferably arranged for such data processing so that at least to a certain extent scanner messages can be analysed (OCR function) for the production of, for example, sender identification for further automatic data processing where such is possible. When such data is produced it is transmitted to the correspondence system 1,35 for registration.

For the distribution paths for outgoing correspondence, see the lower boxes 25-28, it is the case that what was stated in connection with the description of Figure 1 applies. It is assumed, as for the previous example, that correspondence via the postal services is prepared internally within the company via a combination of the control unit 9 and the printer 8. In addition it can be assumed that a fax machine 26 is available and also sending capabilities for e-mail 27 and possibly also addressable transmission capabilities 28. It can therefore be expected that the employees, box 37, often send their correspondence via one of the abovementioned distribution paths without making use of the database. However, if it is wished to use the database in the way described above for the selection of the distribution path, this requires a direct connection to the database or a connection via a scanner. The server 38 is also assumed to have a bi-directional connection with the database 2, suitably as in the first example via a control unit such as the control unit 9.

35

Data can thus arrive at the database 2 from various sources: from a system 28 for addressable electronic messages, from the sorting station 36 either directly

or via a scanner, from the employee, box 37, and from the server 38 directly or via a control unit. For data arriving from the sorting station 36 and/or the employee or from the server 38 and then via a control
5 unit, the task of the database is to carry out the described search operation and implement distribution in the way described in connection with figure 1.

Several benefits are gained by means of the method and
10 the system according to the invention. We have already pointed out the ability to select the most advantageous distribution path in a simple way by making use of an automatic process controlled by the separate database equipped with search functions for addresses in a
15 comprehensive address directory. This handling can be expected to provide the impetus for the user's network of contacts to change over to electronic communication, whereby an even larger circle is created within which this rational means of communication is used regularly.

20 It should be added that the use of the database for distribution, both the internally initiated distribution and the distribution initiated by the incoming correspondence, can constitute a reason for
25 transferring additional services to the database. By means of the channels of communication which are set up, it can be expedient to carry out book-keeping by means of the organization of the database, which particularly for smaller companies can result in lower
30 handling costs, greater security and reduced need for personnel than with corresponding internal financial handling.

The description above is based on the fact that the
35 printer 8 for the printing out of documents which are to be sent by post is situated in connection with the sender system 1 rather than closely connected to the database 2. The control unit 9 can thereby operate in

- 20 -

such a way that the database only handles electronic distribution of the computerized information, while on the other hand information which is to be sent by post is handled by the sender system's printer 8, so that a document is produced which can be handed to the postal services on the part of the sender system. This can be a suitable embodiment of the invention, particularly if there is a large quantity of transmissions in document form via post or in some other way such as by courier, for which electronic addressing is not applicable. For example, the addressees concerned may not have fax or an e-mail address or the consignments can largely concern original documents.

Within the scope of the invention the system procedure can, however, be such that one or more printers are connected to the database, so that the control unit or other control function connected to the database activates the connected printer for the printing out of the documents for which searching in the database's address directory reveals that there is no address for electronic distribution available. The document can then be processed for forwarding as a service within the database.

25

This can be the most suitable embodiment when it is not wished to process some document consignments within the sender system.

Of course data for the document consignments which are not processed within the user system must be reported to the relevant function address in the same.

PATENT CLAIMS

- 5 1. Method for computer-controlled distribution of
information via a number of different communication
systems from a computer-based user system (1) within a
correspondence system (1,35) arranged for the
production of electronic data for the control of a
10 number of printers (8) by means of which documents can
be produced with information corresponding to the
abovementioned electronic data, characterized in that a
control unit (9) is arranged in the respective
transmission line for the abovementioned electronic
15 data to the respective printer (8), which control unit
upon activation receives this data intended for the
printer and transfers it to a database (2) arranged for
the purpose during a break in the transmission of the
abovementioned data to the printer (8), where the
20 database, which is provided with a comprehensive
directory (16) of addresses including electronic
addresses where available, searches for an adequate
electronic address in the address directory if such
address is available, on the basis of the relevant
25 recipient identification transmitted from the sender
system (1) via the control unit (9), after which the
information is transmitted to the address in question
via electronic distribution, while for data concerning
recipient identification transmitted to the database
30 for which an electronic address cannot be found, the
abovementioned data intended for the respective printer
(8) is transmitted to the printer for the printing out
of documents which can be sent by post.
- 35 2. Method according to Claim 1, characterized in that
the database (2) in connection with the abovementioned
distribution to the correspondence system (1,35)
transmits data concerning information transmission to

the correspondence system (1,35) for further data processing.

3. Method according to Claim 1 or 2, characterized in
5 that the correspondence system (1,35) within a
subsystem (35) for the reception of correspondence
carries out sorting of the incoming correspondence for
information suitable for automatic data processing and
transfers it electronically to the database (2) for
10 data processing such as supplementing with electronic
addresses produced from its directory (16).

4. Method of computer-controlled distribution of
information via a number of different communication
15 systems from a computer-based sender system (1) within
a correspondence system (1,35) arranged for the
production of electronic data related to the
abovementioned information and from which data
information carriers are produced for the
20 abovementioned distribution, characterized in that the
abovementioned data is transmitted to a database (2)
arranged for the purpose, where the database which is
provided with a comprehensive directory (16) of
addresses including electronic addresses where
25 available, obtains an adequate electronic address in
the address directory if such address is available, on
the basis of the relevant recipient identification
transmitted from the sender system (1) via the control
unit (9), after which the information is transmitted to
30 the address in question via electronic distribution,
while for data concerning recipient identification
transmitted to the database for which an electronic
address cannot be obtained, the abovementioned data is
transmitted to a printer (8) for the printing out of
35 documents which can be distributed by post.

5. Method according to Claim 4, characterized in that
the database (2) in connection with the abovementioned

distribution transmits data concerning information transmission to the correspondence system (1,35) for further data processing.

5 6. Method according to Claim 4 or 5, characterized in that the correspondence system (1,35) within a subsystem (35) for the reception of correspondence carries out sorting of the incoming correspondence for information suitable for automatic data processing and
10 transfers it electronically to the database (2) for data processing, such as supplementing with electronic addresses produced from its directory (16).

15 7. System for computer-controlled distribution of information via a number of different communication systems utilizing the method according to any of Claims 1-3, characterized in that its correspondence system (1,35) comprises a computer-based sender system (1) which is arranged for the production of electronic
20 data, a number of printers (8) arranged for the production of documents with information corresponding to the abovementioned electronic data, a control unit (9) arranged in the respective transmission line for the abovementioned electronic data to the
25 abovementioned printers (8), a database (2) provided with a comprehensive directory (16) of addresses, where the control unit (9) is arranged upon activation to receive data intended for the printer and transfer it to the database during a break in the transmission of
30 the abovementioned data to the printer, with the database arranged to obtain an adequate electronic address upon the reception of the abovementioned data if such address is available and to transmit the information to the address in question via electronic
35 distribution, while for data concerning recipient identification transmitted to the database for which an electronic address cannot be obtained, the database is arranged to transmit the abovementioned data to the

respective printer for the printing out of documents which can be sent by post.

8. System according to Claim 7, characterized in that
5 the correspondence system (1,35) comprises a subsystem (35) for the reception of correspondence, which subsystem comprises a sorting station (36) arranged for the reception of correspondence via the available distribution channels (25, 26, 27, 28) and for sorting
10 such correspondence that is suitable for automatic data processing, such as supplementing with electronic address, and arranged with a data link for transmission to the database (2) of data concerning such correspondence for further data processing and
15 returning to the correspondence system (1,35) for registering and further processing.

9. System for the distribution of information via a number of different communication systems utilizing the
20 method according to any of Claims 4-6, characterized in that its correspondence system (1,35) comprises a computer-based sender system (1) which is arranged for the production of electronic data related to the abovementioned information and from which data
25 information carriers are produced for the abovementioned distribution, a database (2) provided with a comprehensive directory (16) of addresses including electronic addresses where available, at least one printer (8) connected to the database (2) for
30 documents, with the database arranged to receive the abovementioned data and search in the directory for an adequate electronic address if such address is available and to transmit the information to the address in question via electronic distribution, while
35 for data concerning recipient identification transmitted to the database for which an electronic address cannot be obtained, the database is arranged to transmit the abovementioned data to the abovementioned

- 25 -

printer (8) for the printing out of documents which can be distributed by post.

10. System according to Claim 9, characterized in that
5 the correspondence system (1,35) comprises a subsystem
(35) for the reception of correspondence, which
subsystem comprises a sorting station (36) arranged for
the reception of correspondence via the available
distribution channels (25, 26, 27, 28) and for sorting
10 such correspondence which is suitable for automatic
data processing, such as supplementing with electronic
address, and arranged with a data link for transmission
to the database (2) of data concerning such
correspondence for further data processing and
15 returning to the correspondence system (1,35) for
registering and further processing.

PCT

REC'D 10 JUL 2001

WIPO PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

14

Applicant's or agent's file reference 111433 AM	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/SE00/00565	International filing date (day/month/year) 23/03/2000	Priority date (day/month/year) 24/03/1999
International Patent Classification (IPC) or national classification and IPC G06F17/60		
Applicant WEBGIRO AB		



- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 8 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of 24 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 11/10/2000	Date of completion of this report 06.07.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Corcoran, P Telephone No. +49 89 2399 2146 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/SE00/00565

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-21 as received on 06/04/2001 with letter of 03/04/2001

Claims, No.:

1-4 as received on 06/04/2001 with letter of 03/04/2001

Drawings, sheets:

1/2,2/2 as published

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/SE00/00565

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 3,4.

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 3,4 are so unclear that no meaningful opinion could be formed (*specify*):
see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for the said claims Nos. 3,4.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Yes: Claims 1-2

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/SE00/00565

	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-2
Industrial applicability (IA)	Yes:	Claims	1-2
	No:	Claims	

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

III. Non-Establishment of Report

(1) Claim 3

As to claim 3 the following is noted.

1. Said claim lacks clarity contrary to the requirements of Article 6 PCT. The claim is directed to a system according to claim 2 further characterized in that the service unit (2) is "provided to perform a computer-based analysis of the content of the information". The claims also specifies "effecting computer-based treatment of the information data at the recipient unit (35)".

The terms "computer-based analysis" and "computer-based treatment" are so vague and general that, in the absence of further qualification, the technical features which they imply in the given context cannot be reliably established. Moreover, the claim has been formulated in terms which merely amount to a statement of the desired result (i.e. providing for the performance of "computer-based" analysis / treatment of data), rather than the technical features required to arrive at the result (i.e. the technical features required to implement the desired analysis / treatment of data).

2. On p.18 I.15-22 of the description there is a brief reference to some form of "analysis" or "automatic data processing" using OCR techniques. To the extent that claim 3 may be understood as intended to be directed towards such subject matter, it would appear to relate to features pertaining to the handling of incoming data (p.18 I.7-10) which were not present in the original claim set and for which no search report has been established. Moreover, the level of disclosure concerning the technical details of the "automatic data processing" is so low that it must be considered either as pertaining to matter generally known to the skilled person or else as failing to satisfy the requirements of Article 6 PCT in respect of support in the description and/or the requirements of Article 5 PCT concerning completeness of disclosure.

- (2) Claim 4 is dependent on claim 3. In view of the fact that the matter for which protection is sought in claim 3 cannot be reliably determined, a similar objection arises in respect of claim 4. Moreover, it is noted that claim 4 merely recites a specification of the type of information being analysed and does not provide any technical details concerning the analysis. Hence, the subject matter of said claim 4 is not in itself of a technical character and does not in itself provide any clarification

of any technical contribution to the art in respect of claim 3.

- (3) Having regard to the observations in 1. above, the examiner finds that due to the lack of clarity concerning the definition of the matter for which protection is sought in claim 3, a reliable determination of the underlying technical problem and the essential technical features of the proposed solution is not possible. Moreover, the claim appears to relate to subject matter which is either inadequately supported by the description and/or for which no search report has been established. In view of the foregoing, no report under Article 35(2) PCT has been established for said claim 3 and claim 4 dependent thereon.

V. Reasoned Statement under Article 35.2 PCT

(1) Cited Prior Art

Reference is made to the following documents:

D1: US 5513126 A;

D2: EP 838774 A;

D3: US-A-4713780;

D1 and D2 were not cited in the International Search Report.

(2) Independent Claims

- 2.1) The application relates to a document distribution method and corresponding system based on a modular client-server type architecture (cf. Fig. 1) which is arranged to distribute documents from a sender to a recipient. The documents are distributed by "electronic distribution" if an electronic address is found for the recipient, otherwise the documents are routed to a printer and printed out for conventional postal distribution (cf. p.12 I.24-35).

The claimed invention is directed towards the problem of selecting an appropriate distribution path for documents (p.3 I.36 - p.4 I.3). The decision to select a particular distribution path for distributing a document is essentially of an administrative nature and does not relate to a technical problem *per se*. The technical means employed to solve the problem in the context of the present application are not considered to require the exercise of inventive skill in the given context for the reasons given below.

- 2.2) Document D1 which is considered to represent the closest prior art, discloses a document distribution system based on a modular client-server type architecture which is arranged to distribute documents from a sender to a recipient. The system of D1 is further arranged to provide computer controlled selection of distribution paths (col.4 l.24-9). The preferred form(s) of receiving information are defined in a "receiver profile" and may include hardcopy, e-mail and facsimile (col.7 l.48-54). The defined "communication channels" can be assigned a priority and the sender can also override the "receiver profile" (col.4 l.48-53). D1 envisages both the distribution of documents by "electronic distribution" and also in printed form ("hardcopy") by conventional post (cf. Fig.1, mail box on right hand side).
- 2.3) The "directory information" of the present application (p.12 l.36 - p.13 l.7) is considered to be substantially equivalent to the "receiver profile" of D1 inasmuch as it comprises contact details for the entities who will receive the information to be distributed. The most significant difference appears to be that in context of D1 the contact information ("receiver profile", directory information) is primarily intended to be "receiver-defined" whereas in the context of the present application it is intended to be "sender defined". However, the terms "receiver defined" and "sender defined" merely indicate who has primary responsibility for entering and maintaining the contact information. The examiner does not find that this difference implies significant non-obvious technical differences in the underlying data storage and processing infrastructure. In this regard it is noted that D1 states that the sender can selectively override the "receiver profile" (col.4 l.47-52) which clearly implies or at least suggests that the sender may exercise discretionary control over the determination of the distribution path.

The examiner finds that whereas the claimed invention has a technical character inasmuch as it envisages the automation of an administrative process relating to the selection of "the most advantageous" distribution path, the disclosed computer controlled selection of distribution paths merely envisages the provision of a directory or database of address information relating to correspondence partners and the extraction and processing of relevant data therefrom using generally known information storage and retrieval techniques whose employment in the given context would not require the exercise of inventive skill, (cf. p.19 l.21-25).

- 2.4) Document distribution systems based on a modular client-server type architecture are well known (cf. D2 and D3). Having regard to the teaching of D1, it does not appear to require the exercise of inventive skill to provide a computer controlled selection of distribution paths for routing the document to the appropriate device or subsystem for further processing substantially as recited in the present independent claims.

As to the alleged "effects" or "benefits" of the claimed invention, viz. facilitating a change to electronic communication on the part of parties using correspondence by mail (p.2 l.22-25) or providing the impetus for such a change (p.19 l.25-29), it is noted that these matters relate to changes in the behavioural patterns of users with respect to the use of existing technologies for electronic document distribution. However, desirable or advantageous this may be, the examiner finds that it does not amount to a non-obvious technical effect arising from a technical modification to such existing technologies. In this regard, it is noted that the mere juxtaposition or association of known devices or processes functioning in their normal way and not producing any non-obvious working interrelationship does not constitute an inventive step, (PCT Guidelines IV 8.8 (B1)).

In view of the foregoing, the subject matter of claims 1 and 2 is found not to meet the requirements of Article 33 PCT in respect of inventive step.

VII. Certain Defects in the International Application

- (1) Contrary to the requirements of Rule 5.1(a)(ii) PCT, the documents D1-D3 are not identified in the description with appropriate reference to the relevant background art disclosed therein.
- (2) In accordance with Rule 6.3(b) PCT, it is considered appropriate to cast independent claims in the two-part form with those features known in combination from the prior art being placed in a preamble (Rule 6.3(b)(i) PCT) and the remaining features being included in a characterising part (Rule 6.3(b)(ii) PCT). This requirement has not been fulfilled in the case of the present independent claims.

- 1 -

111433./2001-04-04

TITLE:

This invention relates to a method for computer-controlled distribution of information via a number of different alternative communication systems and system for the application of the method.

TECHNICAL FIELD:

This invention relates to a method for computer-controlled distribution of information via a number of different alternative communication systems and system for the application of the method.

CURRENT TECHNOLOGY:

For the transmission of document information between different parties such as between different companies or between companies and private individuals, there are principally two distribution systems available, namely via letter post and via electronic document transmission such as via fax or e-mail. Particularly within the business community there is a desire to limit the use of letter post as much as possible as it results in extensive paper handling and consumption of paper, not only for documents but also for envelopes. At the same time postal charges are high and the postal service relatively slow and sometimes rather unreliable. By the use of fax, paper handling is reduced and the information reaches the recipient very quickly. In addition the sender can obtain confirmation that the information has arrived. E-mail offers even greater benefits. To a certain extent the transmission of information can take place completely without the use of paper, if the information is written to computer memory on the premises of the sender and transferred and read off on the recipient's computer monitor, enabling the recipient to decide whether the message is to be stored electronically, on paper, or not stored at all. An advantage unique to e-mail is that the

- 2 -

electronically-stored information can be used by both the sender and the recipient for editing, for transferring completely or in part to a store or to working files so that it can be used for data processing.

In spite of the fact that electronic communication has many considerable advantages compared to letter post, the latter is still used to a great extent, particularly for private mail as is to be expected but also for outgoing mail from companies which, however, usually have the equipment available for electronic communication.

From US-A-5 513 126 (Harkins et al) is known a network using electronic communication channels, the network being provided to change the information transmitted from a sender to a communication profile established by the recipient. The invention presupposes that the sender and the recipient are subscribers of the network and being equipped with devices for electronic communications. The invention has no relevance to a providing a facilitating to parties using correspondence by mail to change to electronic communication.

There are several reasons for electronic communication being used to a limited extent in spite of the equipment being available. There will probably always be documents which are only suitable for physical conveyance, in particular original material such as signed legal documents and also material with a large volume, such as books and other extensive printed material. One reason which should, however, be able to be largely eliminated is the uncertainty on the part of the sender as to whether the recipient has the facilities to receive and handle electronically transmitted information and if so by what means and to

- 3 -

what address. On the other hand practically every imaginable contact has a known postal address, which means that the postal service is used as a necessity for much correspondence. For example, authorities and institutions such as banks regularly use the postal services for messages, injunctions, transaction confirmations, account communications and in particular for invoices. In spite of all its advantages, the relatively widespread use of electronic communication is limited to messages between companies and other parties between which there is close interaction and a frequent exchange of information.

It is therefore the case that within companies, institutions and authorities great gains could be made if the postal service was to be replaced by electronic communication whenever it was possible to do so. The gains would not just lie in the actual service being rationalized and having the least possible manual involvement but also in the information being able to be produced by the sender in a considerably more rational way than when using the postal service and in particular in the fact that it would be able to be used by the recipient directly as an input for further processing and storage whereas paper documents must often be transferred manually into a digital form before they can be worked on. This is particularly marked where accounting is concerned, as most companies today do their bookkeeping, ledger entries and financial reports by means of data processing using computers. It is therefore necessary for paper documents such as invoices, bank statements, etc, to be entered manually in order to be integrated in the data processing.

35

DESCRIPTION OF THE INVENTION:

This invention concerns a method for computer-controlled selection of distribution paths for

- 4 -

information of various kinds produced on the premises of a sender in such a way that the best available distribution path is selected. The invention also concerns a communication and process system for the implementation of the method.

The intended information is produced in data form on the premises of the sender and transferred to a "distribution exchange", which independently analyses the information with respect to the reception address and type, and on the basis of the analysis selects the best communication path to be used and thereafter is responsible for the distribution. The method and the system for its implementation create many opportunities both on the premises of the sender and recipient for high-level rationalization of the production and further processing of the information.

Another important advantage of the invention is that it provides a high level of security against incorrect processing of the data, both on the premises of the sender and of the recipient. Similarly, high security is achieved against incorrect addressing and against siphoning off of information to unauthorized parties.

An additional and very important advantage is that the system can be introduced and utilized on the premises of the user without requiring any extensive installation work, and much of the work in the form of entering basic data, utilizing new computer programs and training of personnel can be eliminated by use of the method and system according to the invention.

DESCRIPTION OF THE FIGURES:

In the following the method and system according to the invention will be described with reference to the attached drawings which show the system diagrammatically.

- 5 -

Figure 1 shows a block diagram of the system regarding its function for production and distribution of information on the premises of the sender; and

Figure 2 shows a corresponding block diagram regarding the function of the system for the reception of information.

10. PREFERRED EMBODIMENTS

In the following the method and system are described in a mode of application aimed initially for accounting information with associated correspondence within a company or institution. Below are listed the most important processes and the documents associated with these within such accounting.

I. The debiting procedure

1. Production of basic debiting data on the basis of recorded deliveries, work carried out, etc
2. Determination of debiting data
 - a) addressee
 - b) specification
 - c) amount
 - d) terms
3. Internal recording of debiting data for the drawing up of:
 - a) ledgers
 - b) payment follow-up
 - c) financial reporting
4. Production of invoices in the form determined by the method of distribution (see 5 below)
5. Distribution of invoices in accordance with any of the methods:
 - a) the postal services
 - b) by fax

- 6 -

- c) by e-mail via printer on the premises of the recipient
- d) direct electronic transmission of data to the data system on the premises of the recipient in accordance with the agreed addressing

II. The reception process

1. Arrival of invoice/invoicing data via:

- a) the postal services
- b) fax
- c) e-mail via printer
- d) direct input of data into the recipient's data system in accordance with the agreed addressing

2. Sorting of correspondence by content such as:

- a) payment instructions, for example invoices, demands for fees
- b) reporting of financial data concerning payments made, payments received, balances, etc
- c) other finance-related correspondence, for example queries concerning invoices issued, requests for quotes, orders, messages concerning payment difficulties
- d) correspondence not related to finances which is to result in action, for example injunctions and demands from the authorities or other correspondence with a fixed reply deadline
- e) correspondence not related to finances, of a general and informative nature

3. Internal distribution of incoming correspondence in accordance with its classification (II.2 a-e)

Classification in accordance with (2)

- a,b) To be recorded as financial data in the internal accounting system which is assumed to be computer-based

- 7 -

- 5
- 10
- c) to be distributed internally to the department/person responsible for the sector to which the matter is related
 - d) the deadline is to be noted and the communication is to be distributed to the responsible party within the sector to which the action refers
 - e) messages with possible relevance to the current business activity are to be distributed to the departments/persons concerned, for information and possible action.

15

20

As can be seen, after sorting, the finance-related correspondence (2a, b) can be recorded in the recipient's computer-based accounting system and results in relatively little manual processing. Other correspondence (2c, d, e) can not be rationalized to the same extent, but practically always requires personal consideration and action. However, computer-based tools such as checking and memory functions, word-processing, etc, can be used.

25

III. Processes brought about by the incoming correspondence

- 30
- 35
- 1. Payment processes, which after the arrival of the invoice or other payment demand has been recorded in a computer-based accounting system can be paid automatically via a bank, bank giro or postal giro by means of correct programming
 - 2. Financial reporting which for a well-developed computer-based accounting system can be produced by means of a suitable computer program.
 - 3. Following up of financial reports after examination. Can result in the redistribution

- 8 -

of funds, taking up or payment of loans, reorganization of certain business activities and other measures which in general fall under the area of responsibility of the management. Computer-based tools can only be used to a limited extent.

4. Correspondence not related to finance. Financial management controlled by computer can only be used for certain activities with well-established routines which are used frequently. However, in general there is a need for computer-based tools.

As shown by the above list there are great opportunities to rationalize the debiting procedure (I) by means of computer-based data processing. The first precondition for this is that the sender has access to a computer-based accounting system and computer programs for the requisite processes. This is the case for large companies and to an ever increasing extent also for smaller companies, and is always the case for companies and institutions with extensive financial management tasks, such as banks, insurance companies and certain authorities. However, the distribution (I.5) of invoices and other payment demands has not been fully rationalized as there is a dependence upon the reception capabilities of the recipient and the sender's knowledge of these. For received correspondence (II) there is similarly a dependence upon the correspondence medium used by the sender and, as mentioned, a sender will often not use the most rational distribution channel due to uncertainty regarding the available means of distribution. This means of course that the form of the received correspondence is determined by this uncertainty. If the distribution takes place

- 9 -

in a less rational way which is not based on electronic methods, this also has an adverse effect on the opportunities for rationalizing the sorting (II.2) and also affects the recording in the computer-based accounting system (II.3,a and b), so that there must be manual involvement. When recording in the accounting system has been carried out, the subsequent accounting measures (III.1, 2) can be carried out rationally if the accounting system is designed for this.

Accounting within companies and institutions is intrinsically well suited to computer-aided rationalization, which is also shown by the fact that such rationalization has been introduced relatively quickly and widely within the financial sector. As can be seen from the above, the main obstacle to optimal rationalization is the lack of rationalization of the distribution of the finance-related correspondence. Another obstacle particularly related to smaller companies is a lack of investment funds and time for the setting up of a well-developed accounting system.

Even though accounting has been mentioned as an area well-suited to the utilization of the invention, this does not exclude there being other areas where repeated routines occur. Examples of such areas are the booking of tickets and ordering of goods.

Other sent and received correspondence which is not based on set repeatable routines such as those relating to accounting does not provide the same opportunities for rationalization but requires a considerable degree of personal decision-taking and action. Here it will largely continue to be necessary to be satisfied with utilizing the available tools in the rationalization process, such as computer-based information systems, computer-based management tools, etc. However, even

- 10 -

here an important rationalization factor can be the fact that rational distribution is utilized. This is carried out to an ever increasing extent by fax and e-mail. However, here the restrictions also apply originating from the fact that it is not known what reception options the recipient has, for which reason the expensive and slow postal services must be used.

In the following the system according to the invention and the method in connection with this for the implementation of debiting procedures will be described. Reference is made first to the block diagram in Figure 1.

This depicts a system comprising three main parts: the sending party's unit 1 (above and to the left of the dotted line in the figure), an external service unit 2 (to the right of the dotted line) and the recipient's unit 3 (below the dotted line). The unit 1 comprises one or more devices for which the following definitions apply: computer 4, scanner 5, server 6 including requisite memory units, accounting system 7, printer 8, control unit 9 for correspondence and its distribution. Within the sender's unit 1 there can be several of these devices. Some units can be omitted, while other types of device for data processing and storage can be included. However, it is necessary for there to be devices for entering electronic data into the control device 9 and at least one printer 8 connected to this. Concerning the accounting system 7, this can be designated as a function within the system and does not need to be regarded as a separate hardware device but can be integrated into the rest of the data processing system. In this case the function is to comprise the ability to enter financial data, storage and processing of this and output of the data which is produced from the entered material by means of the data processing.

- 11 -

The service unit 2 can be used by several units 1 on the premises of companies and institutions. The service unit is connected to control devices in the connected units via connections 15, which can be cable links or wireless connections and preferably a connection via some available data network.

The service unit 2 comprises a data register 16 with an advanced search function for searching and extracting data from a large quantity of stored data. A connection device 17 is connected to the incoming connection 15 from the unit 1 and to the data register 16 and also to outgoing connections 18, 19 and 20. In addition it is assumed that the connection device is connected to one or more computers 21 with monitors and keyboards for human interface.

The sender's unit 1 and the service unit are designed for communication to a number of recipients, which in the figure are represented by the units 3. These recipient units can have different equipment for the reception of correspondence. The different reception equipments which can occur are represented in Figure 1 by the following definitions: incoming postbox 25 for postal correspondence, fax machine 26, printer 27 connected to a computer for the reception of e-mail, and a data storage and data processing device 28 for the reception of data in accordance with special addressing and activation codifying. Different recipient units can therefore have a greater or lesser extent, from the case where it is only possible to use the postal services for document-based communication which is to be registered, to the case where there is a comprehensively developed system with special addressing and activation functions in unit 28. Examples of such functions are transfers between accounts in different banks where a codified remote message triggers the transactions with account entry

- 12 -

and subsequent confirmation operations. The different extent of the units 3 on the premises of the respective prospective recipients is the reason for the above-mentioned uncertainty regarding which means of distribution can be used by the user.

As mentioned, the service unit is connected to the control device 9, which in turn is connected for the reception of data produced in the data system of the sender's unit and arranged to control the printer 8. The control device 9 is thereby arranged to transmit the received information via the line 15 to the control device 17 of the service unit 2 during breaks in the transmission of this data to the printer. The transmission to the service unit initiates a search process in the register unit 16. This is arranged to search for correspondences for the addressee identifications included in data obtained from the control device 9, in particular name and address information, and if these do not contain relevant electronic address information, to search for such information.

The process described can result either in a relevant electronic address being found from the identification data obtained from the control device 9 or by the search process, or in no such data being found. If there is an electronic address the service unit takes over the forwarding, which is carried out electronically via the addressable data device 28, e-mail 27 or fax 26 in that order of priority. If no electronic address can be found, the received data is returned to the control device 9 and forwarded to the printer 8, which is activated to print out the corresponding document for delivery by post.

Directory information in the service unit can be obtained from a number of media such as telephone

- 13 -

directories, fax directories, e-mail directories, official directories, etc., which generally are available in digital form, often via CD-ROM. As far as possible each address is supplemented with its address(es) for electronic communication: electronic addressing unit 28 with its codes, e-mail address or fax number.

If no useable electronic address can be found, distribution to the incoming postbox 25 must take place from the sender unit's printer 8 via the normal postal service. In other words, the correspondence in question must be printed out using the printer 8 and sent to the recipient by post as a letter. Other communication to the recipient, which is electronic, is sent as mentioned via the service unit 2. Accordingly the fax 26 is shown connected to the connection device 17 of the service unit by the line 18 via the printer-computer 27 by the line 19 and to the addressable computer device 28 by the line 20. Like the connection 15 these connections can be via cable or wireless and preferably by means of some established data network.

In the function for the intended debiting procedure the control device 9 constitutes a key element for the implementation of the method according to the invention. It is connected to the server 6 for the reception of data in such a form that it can control the printer 8 for the printing out of documents. Such documents are assumed here to be invoices or other payment demands, which are produced in the sender's unit 1. Such production can be implemented in various ways: by manual entry of data via the computer 4, by scanning of documents in the scanner 5 and/or by obtaining it from the accounting system 7. Sources of data to be entered in the accounting system can be of various kinds, such as delivery notes, work reports and incoming debits from sub-suppliers, which in turn can

- 14 -

already be recorded in a form suitable for entry and can have been produced in the computer or scanner, for example. In addition the control unit 9 is connected to the printer 8 for the production of documents in such a form that they can be sent by post. As mentioned, the control device is connected to the service unit 2 and its connection device 17 by means of the connection 15.

For a debiting procedure the following operations are carried out:

Entered data from the server to the control device 9 is forwarded via the connection 15 to the service unit 2 during a temporary break in the connection from the control device 9 to the printer 8. After entry, addressing data incorporated in the produced and transmitted data quantity is sent to the data register 16 for activation of its search function. The data which is found in the register comprises name and address information for the circle of addresses within the territory which is covered by the agreed service via the service unit 2. If any electronic addressing capabilities are found for the recipients in question during the searching this is selected with prioritizing of the connection via the addressable unit 28 and thereafter via e-mail and finally by fax. If any of these capabilities are available the service unit 2 produces from the quantity of data received from the control device 9 an invoice for the electronic distribution which has been decided upon. The above-mentioned data is supplemented by already entered data from the sender for printing out a complete invoice with the sender's logo, etc. In addition it is assumed that text will be included which provides information to the effect that the communication corresponds to the sending of an original invoice and that there will be no delivery by post.

- 15 -

A precondition for this operation being able to be carried out is that an electronic address for the recipient in question is found by the search. As, if such is the case, the electronically transmitted invoice is to replace the postal service, the control device ensures that no data is supplied to the printer 8 so that no postal delivery takes place. However, if no electronic address is found by the search, the data quantity is returned to the control device for forwarding to the printer 8. The document thus produced is handled in the normal way for postal delivery. Finally a report is sent from the service unit to the sender's accounting system 7 stating that the invoice has been sent and which communication medium was used.

This use of the method using the control device and the service unit is given as an example of the use for debiting. There is, however, no reason why it cannot be used for other correspondence, for example for follow-up measures to debiting, such as reminders and dunning letters. However, it can also be used for other correspondence where the sender cannot immediately find which distribution paths are available and where electronic transmission is preferable to the postal service.

Within the scope of the invention it is also the case that the control device 9 can be extended to include additional functions. An example of such a function is that it is equipped for the programming of particular functions. For example, it is possible for the printer 8 only to be used temporarily for a certain function, for example invoicing, and otherwise to have a more general use. For this it is expedient for there to be a program which is activated so that the above-mentioned function of the control unit can be put into effect, that is alternative production of printed communication or electronic communication via the service unit 2.

- 16 -

When this program is not activated the printer is connected directly to the server or other device in the sender's unit for normal printer applications. If, however, the above-mentioned program is put into effect, this can also comprise the above-mentioned supplementary data for creating a document in those instances when it is preferred to transmit the company logo or other information for printing out by the printer instead of using pre-printed headed paper or forms. As mentioned, it is assumed that such supplementary data will be able to be entered in the service unit but it can also be found in a data program for activation of the printer by means of the control device. Activation of the control device will also mean that the above-mentioned reporting function and updating of the accounting system 7 are maintained in the event of invoicing and other accounting measures.

Activation of the programs which it is wished to use in the sender's unit can of course be carried out by command via, for example, the computer 4 or via a keyboard connected directly to the control device. Another way is to connect in a diskette or CD-ROM containing the program in question. A further possibility which is also envisaged, is to provide the control device, or a device connected to this with a card reader. Using cards from which the program can be read off or activated from a memory, the required function can be ensured by reading the relevant cards. The cards can be clearly marked so that no errors occur, which is important particularly in connection with accounting. The cards can also be distributed only to authorized personnel, so that misuse, for example fraudulent debiting, can be prevented.

35

Figure 2 shows in greater detail how received correspondence can be handled according to the method in an internal system 35 on the premises of the

- 17 -

recipient (between and to the left of the dotted lines). Above the upper dotted line there are the distribution methods 25-28 as shown in figure 1 and which here symbolize the paths for the correspondence coming to the system 35. Below the lower dotted line are the same distribution methods 25-28 but here symbolizing the paths for outgoing correspondence, which is occasioned by the respective incoming correspondence. To the right of the dotted vertical line is the service unit 2. The unit 1 for outgoing correspondence is indicated by a box outlined by dotted lines. It can be assumed that most of the users of the method and the system will have the need to be able both to send and receive correspondence. Here separate internal systems are described for these functions but in practice it can be expected that they will be integrated with each other to form a complete correspondence unit which can be designated 1,35.

The devices incorporated in the internal system 35 can be defined in the following way: a sorting station 36 to which postal correspondence 25, fax messages 26 and e-mails 27 are directed. The incoming material is then sorted, which can be assumed to be carried out manually, into mail that is to be processed by some employee, see the box 37, and mail where the data it contains can be entered via, for example, a computer into a server 38 for the storage of data for processing internally. Such data can, for example, be information from incoming invoices which is recorded manually. Such data can also arrive at the server 38 from employees, box 37.

Electronically addressable data, box 28, is assumed to be entered in the server for data processing directly, without going via the sorting station 36. As indicated by the arrow 40 it is assumed that the server 38 is connected to the unit 1 for the production and dispatch

- 18 -

of correspondence, cf. the situation in figure 1. It is therefore possible for the server functions for 6 and 38 to be processed and stored in the same internal system.

5

What has been described so far concerns the purely internal handling. If, however, the service unit 2 is also used for handling incoming data, the sorting station 36 is to be connected to the service unit 2 directly or via a scanner 41. At least to a certain extent addressable messages are thereby also taken via the distribution path 28 to the service unit 2 for transmission via this to the server. Employees, box 37, are also connected to the service unit directly or possibly also via a scanner. The service unit 2 is preferably arranged for such data processing so that at least to a certain extent scanner messages can be analysed (OCR function) for the production of, for example, sender identification for further automatic data processing where such is possible. When such data is produced it is transmitted to the correspondence system 1,35 for registration.

For the distribution paths for outgoing correspondence, see the lower boxes 25-28, it is the case that what was stated in connection with the description of Figure 1 applies. It is assumed, as for the previous example, that correspondence via the postal services is prepared internally within the company via a combination of the control device 9 and the printer 8. In addition it can be assumed that a fax machine 26 is available and also sending capabilities for e-mail 27 and possibly also addressable transmission capabilities 28. It can therefore be expected that the employees, box 37, often send their correspondence via one of the abovementioned distribution paths without making use of the service unit. However, if it is wished to use the service unit in the way described above for the selection of the

- 19 -

distribution path, this requires a direct connection to the service unit or a connection via a scanner. The server 38 is also assumed to have a bi-directional connection with the service unit 2, suitably as in the first example via a control unit such as the control unit 9.

Data can thus arrive at the service unit 2 from various sources: from a system 28 for addressable electronic messages, from the sorting station 36 either directly or via a scanner, from the employee, box 37, and from the server 38 directly or via a control device. For data arriving from the sorting station 36 and/or the employee or from the server 38 and then via a control unit, the task of the service unit is to carry out the described search operation and implement distribution in the way described in connection with figure 1.

Several benefits are gained by means of the method and the system according to the invention. We have already pointed out the ability to select the most advantageous distribution path in a simple way by making use of an automatic process controlled by the separate database equipped with search functions for addresses in a comprehensive address directory. This handling can be expected to provide the impetus for the user's network of contacts to change over to electronic communication, whereby an even larger circle is created within which this rational means of communication is used regularly.

It should be added that the use of the service unit for distribution, both the internally initiated distribution and the distribution initiated by the incoming correspondence, can constitute a reason for transferring additional services to the database. By means of the channels of communication which are set up, it can be expedient to carry out book-keeping by means of the organization of the database, which

- 20 -

particularly for smaller companies can result in lower handling costs, greater security and reduced need for personnel than with corresponding internal financial handling.

5 The description above is based on the fact that the printer 8 for the printing out of documents which are to be sent by post is situated in connection with the sender unit 1 rather than closely connected to the
10 service unit 2. The control device 9 can thereby operate in such a way that the service unit only handles electronic distribution of the computerised information, while on the other hand information which is to be sent by post is handled by the sender unit's
15 printer 8, so that a document is produced which can be handed to the postal services on the part of the sender unit. This can be a suitable embodiment of the invention, particularly if there is a large quantity of transmissions in document form via post or in some
20 other way such as by courier, for which electronic addressing is not applicable. For example, the addressees concerned may not have fax or an e-mail address or the consignments can largely concern original documents.

25 Within the scope of the invention the system procedure can, however, be such that one or more printers are connected to the service unit, so that the control device or other control function connected to the
30 service unit activates the connected printer for the printing out of the documents for which searching in the address directory of the service unit reveals that there is no address for electronic distribution available. The document can then be processed for
35 forwarding as a service within the service unit.

- 21 -

This can be the most suitable embodiment when it is not wished to process some document consignments within the sender unit.

- 5 Of course data for the document consignments which are not processed within the user unit must be reported to the relevant function address in the same.

111433 TH/MLR
2001-04-03

1

CLAIMS

1. Method of computer controlled distribution of information via a number of different alternative communication channels from a computer-based sender unit (1) producing electronic data corresponding to the above-mentioned information which is including data indicating a postal address of a intended recipient (3) unit (25-28) and being adapted to control a printer (8) to print said information, characterized in that the above-mentioned data via a transmission line (15) is transmitted to a service unit (2), in the service unit the respective postal address data is transmitted to a data register (16) containing a comprehensive directory of electronic addresses as e-mail addresses and telefacsimile numbers together with the corresponding postal addresses for the respective recipients unit and a data searching means being activated, when data relating to a postal address is received from the sender unit, to perform a search of an electronic address corresponding to the postal address received, and if such electronic address is established said data relating to the information corresponding to said address data is forwarded to the electronic address established by means of the search, while if no corresponding electronic address is established the data is forwarded to the printer (8) thereby activating it to print the information inclusive the postal address thereby producing a document adapted to be distributed by mail to the intended recipient (3) unit (25-28)

2. System for computer-controlled distribution of information via a number of different, alternative communication channels utilizing the method according to claim 1, the system comprising as a part the computer-based sender unit (1) provided to produce electronic data corresponding to said information which is including data indicating a postal address of an intended recipient's (3) unit (26-28), and being adapted to control a printer (8) to print said information, characterized by a service unit (2), a transmission line (15) connecting the sender unit (1) and the service unit (2) and provided to transmit said electronic data produced by the sender unit to the service

unit, in the service unit a data register (16) containing a comprehensive directory of electronic addresses together with the corresponding postal addresses, data searching means provided to be activated by means of reception of said postal address data to search of an electronic address corresponding to the postal address received, a connection device (17) provided to forward the information data corresponding to said address data to the electronic address when such an address is established by the search, and to forward said data to the printer (8), when such an electronic address not is established by the search activated on reception of said data, to print the information inclusive the postal address the printer thereby producing a document adapted to be distributed by mail to the intended recipient (3) unit (25-28).

3. System according to claim 2 for computer-controlled distribution of information via number of different, alternative communication channels the system comprising as a part the computer-based sender unit (1) provided to produce electronic data corresponding to said information, which is including data indicating a postal address of an intended recipient's (3) unit (25-28), and being adapted to control a printer (8) to print said information, and as another part a service unit (2), a transmission line (15) connecting the sender unit (1) and the service unit (2) and provided to transmit said electronic data produced by the sender unit to the service unit, in the service unit a data register (16) containing a comprehensive directory of electronic addresses together with the corresponding postal addresses, data searching means provided to be activated by means of reception of said postal address data to search of an electronic address corresponding to the postal address received, a connection device (17) provided to forward the information data corresponding to said address data to the electronic address when such an address is established by the search, characterized by the service unit (2) being provided to perform a computer-based analysis of the content of the information, which by means of said search is established to be forwarded by electronic communication to a recipient's (3) unit (25-28), and

3

being provided to complete said information data, with data based on said analysis and for effecting computer-based treatment of the information data at the recipient unit (35), including specifications for internal distribution in the recipients unit.

5

4. System according to claim 3, characterized by that the said analysis is directed towards information relating to economical matters as debiting particulars containing numerical information in a great extent.

10

15

The diagram illustrates a system architecture. A central processing unit (6) is connected to several components. Above it are input devices (4, 5) and output devices (8, 9). To its right is a storage unit (15). Below the central unit are four more components (25, 26, 27, 28). A detailed view of the storage unit (15) shows internal components like a controller (17) and memory (18). A horizontal line separates the main system from a lower section (3) which contains components 25 through 28.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece	ML	Mali	TR	Turkey
BG	Bulgaria	HU	Hungary	MN	Mongolia	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MR	Mauritania	UA	Ukraine
BR	Brazil	IL	Israel	MW	Malawi	UG	Uganda
BY	Belarus	IS	Iceland	MX	Mexico	US	United States of America
CA	Canada	IT	Italy	NE	Niger	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NL	Netherlands	VN	Viet Nam
CG	Congo	KE	Kenya	NO	Norway	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NZ	New Zealand	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	PL	Poland		
CM	Cameroon	KR	Republic of Korea	PT	Portugal		
CN	China	KZ	Kazakstan	RO	Romania		
CU	Cuba	LC	Saint Lucia	RU	Russian Federation		
CZ	Czech Republic	LI	Liechtenstein	SD	Sudan		
DE	Germany	LK	Sri Lanka	SE	Sweden		
DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						

5 A method for computer controlled distribution of information over a number of different communication systems and a system for the accomplishment of the method.

TECHNICAL FIELD:

10 This invention relates to a method for computer-controlled distribution of information via a number of different communication systems and system for the application of the method.

CURRENT TECHNOLOGY:

15 For the transmission of document information between different parties such as between different companies or between companies and private individuals, there are principally two distribution systems available, namely via letter post and via electronic document
20 transmission such as via fax or e-mail. Particularly within the business community there is a desire to limit the use of letter post as much as possible as it results in extensive paper handling and consumption of paper, not only for documents but also for envelopes.
25 At the same time postal charges are high and the postal service relatively slow and sometimes rather unreliable. By the use of fax, paper handling is reduced and the information reaches the recipient very quickly. In addition the sender can obtain confirmation
30 that the information has arrived. E-mail offers even greater benefits. To a certain extent the transmission of information can take place completely without the use of paper, if the information is written to computer memory on the premises of the sender and transferred
35 and read off on the recipient's computer monitor, enabling the recipient to decide whether the message is to be stored electronically, on paper, or not stored at all. An advantage unique to e-mail is that the

electronically-stored information can be used by both the sender and the recipient for editing, for transferring completely or in part to a store or to working files so that it can be used for data
5 processing.

In spite of the fact that electronic communication has many considerable advantages compared to letter post, the latter is still used to a great extent,
10 particularly for private mail as is to be expected but also for outgoing mail from companies which, however, usually have the equipment available for electronic communication.

15 There are several reasons for electronic communication being used to a limited extent in spite of the equipment being available. There will probably always be documents which are only suitable for physical conveyance, in particular original material such as
20 signed legal documents and also material with a large volume, such as books and other extensive printed material. One reason which should, however, be able to be largely eliminated is the uncertainty on the part of the sender as to whether the recipient has the
25 facilities to receive and handle electronically transmitted information and if so by what means and to what address. On the other hand practically every imaginable contact has a known postal address, which means that the postal service is used as a necessity
30 for much correspondence. For example, authorities and institutions such as banks regularly use the postal services for messages, injunctions, transaction confirmations, account communications and in particular for invoices. In spite of all its advantages, the
35 relatively widespread use of electronic communication is limited to messages between companies and other parties between which there is close interaction and a frequent exchange of information.

It is therefore the case that within companies, institutions and authorities great gains could be made if the postal service was to be replaced by electronic communication whenever it was possible to do so. The gains would not just lie in the actual service being rationalized and having the least possible manual involvement but also in the information being able to be produced by the sender in a considerably more rational way than when using the postal service and in particular in the fact that it would be able to be used by the recipient directly as an input for further processing and storage whereas paper documents must often be transferred manually into a digital form before they can be worked on. This is particularly marked where accounting is concerned, as most companies today do their bookkeeping, ledger entries and financial reports by means of data processing using computers. It is therefore necessary for paper documents such as invoices, bank statements, etc, to be entered manually in order to be integrated in the data processing.

DESCRIPTION OF THE INVENTION:

This invention concerns a method for computer-controlled selection of distribution paths for information of various kinds produced on the premises of a sender in such a way that the best available distribution path is selected. The invention also concerns a communication and process system for the implementation of the method.

The intended information is produced in data form on the premises of the sender and transferred to a "distribution exchange", which independently analyses the information with respect to the reception address and type, and on the basis of the analysis selects the best communication path to be used and thereafter is

responsible for the distribution. The method and the system for its implementation create many opportunities both on the premises of the sender and recipient for high-level rationalization of the production and further processing of the information.

Another important advantage of the invention is that it provides a high level of security against incorrect processing of the data, both on the premises of the sender and of the recipient. Similarly, high security is achieved against incorrect addressing and against siphoning off of information to unauthorized parties.

An additional and very important advantage is that the system can be introduced and utilized on the premises of the user without requiring any extensive installation work, and much of the work in the form of entering basic data, utilizing new computer programs and training of personnel can be eliminated by use of the method and system according to the invention.

DESCRIPTION OF THE FIGURES:

In the following the method and system according to the invention will be described with reference to the attached drawings which show the system diagrammatically.

Figure 1 shows a block diagram of the system regarding its function for production and distribution of information on the premises of the sender; and

Figure 2 shows a corresponding block diagram regarding the function of the system for the reception of information.

35

PREFERRED EMBODIMENTS

In the following the method and system are described in a mode of application aimed initially for accounting

information with associated correspondence within a company or institution. Below are listed the most important processes and the documents associated with these within such accounting.

5

I. The debiting procedure

1. Production of basic debiting data on the basis of recorded deliveries, work carried out, etc
- 10 2. Determination of debiting data
 - a) addressee
 - b) specification
 - c) amount
 - d) terms
- 15 3. Internal recording of debiting data for the drawing up of:
 - a) ledgers
 - b) payment follow-up
 - c) financial reporting
- 20 4. Production of invoices in the form determined by the method of distribution (see 5 below)
5. Distribution of invoices in accordance with any of the methods:
 - a) the postal services
 - 25 b) by fax
 - c) by e-mail via printer on the premises of the recipient
 - d) direct electronic transmission of data to the data system on the premises of the recipient in accordance with the agreed addressing
 - 30

II. The reception process

1. Arrival of invoice/invoicing data via:
 - a) the postal services
 - 35 b) fax
 - c) e-mail via printer

- d) direct input of data into the recipient's data system in accordance with the agreed addressing
2. Sorting of correspondence by content such as:
- 5 a) payment instructions, for example invoices, demands for fees
- b) reporting of financial data concerning payments made, payments received, balances, etc
- 10 c) other finance-related correspondence, for example queries concerning invoices issued, requests for quotes, orders, messages concerning payment difficulties
- 15 d) correspondence not related to finances which is to result in action, for example injunctions and demands from the authorities or other correspondence with a fixed reply deadline
- 20 e) correspondence not related to finances, of a general and informative nature
3. Internal distribution of incoming correspondence in accordance with its classification (II.2 a-e)
- Classification in accordance with (2)
- 25 a,b) To be recorded as financial data in the internal accounting system which is assumed to be computer-based
- c) to be distributed internally to the department/person responsible for the
- 30 sector to which the matter is related
- d) the deadline is to be noted and the communication is to be distributed to the responsible party within the sector to which the action refers
- 35 e) messages with possible relevance to the current business activity are to be distributed to the departments/persons

concerned, for information and possible action.

5 As can be seen, after sorting, the finance-related
correspondence (2a, b) can be recorded in the
recipient's computer-based accounting system and
results in relatively little manual processing.
Other correspondence (2c, d, e) can not be
10 rationalized to the same extent, but practically
always requires personal consideration and action.
However, computer-based tools such as checking and
memory functions, word-processing, etc, can be
used.

15 III. Processes brought about by the incoming
correspondence

1. Payment processes, which after the arrival of
the invoice or other payment demand has been
20 recorded in a computer-based accounting
system can be paid automatically via a bank,
bank giro or postal giro by means of correct
programming
2. Financial reporting which for a well-
developed computer-based accounting system
25 can be produced by means of a suitable
computer program.
3. Following up of financial reports after
examination. Can result in the redistribution
of funds, taking up or payment of loans,
30 reorganization of certain business activities
and other measures which in general fall
under the area of responsibility of the
management. Computer-based tools can only be
used to a limited extent.
- 35 4. Correspondence not related to finance.
Financial management controlled by computer
can only be used for certain activities with
well-established routines which are used

frequently. However, in general there is a need for computer-based tools.

As shown by the above list there are great opportunities to rationalize the debiting procedure (I) by means of computer-based data processing. The first precondition for this it that the sender has access to a computer-based accounting system and computer programs for the requisite processes. This is the case for large companies and to an ever increasing extent also for smaller companies, and is always the case for companies and institutions with extensive financial management tasks, such as banks, insurance companies and certain authorities. However, the distribution (I.5) of invoices and other payment demands has not been fully rationalized as there is a dependence upon the reception capabilities of the recipient and the sender's knowledge of these. For received correspondence (II) there is similarly a dependence upon the correspondence medium used by the sender and, as mentioned, a sender will often not use the most rational distribution channel due to uncertainty regarding the available means of distribution. This means of course that the form of the received correspondence is determined by this uncertainty. If the distribution takes place in a less rational way which is not based on electronic methods, this also has an adverse effect on the opportunities for rationalizing the sorting (II.2) and also affects the recording in the computer-based accounting system (II.3,a and b), so that there must be manual involvement. When recording in the accounting system has been carried out, the subsequent accounting measures (III.1, 2) can be carried out rationally if the accounting system is designed for this.

Accounting within companies and institutions is intrinsically well suited to computer-aided rationalization, which is also shown by the fact that
5 such rationalization has been introduced relatively quickly and widely within the financial sector. As can be seen from the above, the main obstacle to optimal rationalization is the lack of rationalization of the distribution of the finance-related correspondence.
10 Another obstacle particularly related to smaller companies is a lack of investment funds and time for the setting up of a well-developed accounting system.

Even though accounting has been mentioned as an area
15 well-suited to the utilization of the invention, this does not exclude there being other areas where repeated routines occur. Examples of such areas are the booking of tickets and ordering of goods.

20 Other sent and received correspondence which is not based on set repeatable routines such as those relating to accounting does not provide the same opportunities for rationalization but requires a considerable degree of personal decision-taking and action. Here it will
25 largely continue to be necessary to be satisfied with utilizing the available tools in the rationalization process, such as computer-based information systems, computer-based management tools, etc. However, even here an important rationalization factor can be the
30 fact that rational distribution is utilized. This is carried out to an ever increasing extent by fax and e-mail. However, here the restrictions also apply originating from the fact that it is not known what reception options the recipient has, for which reason
35 the expensive and slow postal services must be used.

In the following the system according to the invention and the method in connection with this for the

implementation of debiting procedures will be described. Reference is made first to the block diagram in Figure 1.

- 5 This depicts a system comprising three main parts: the sending party's subsystem 1 (above and to the left of the dotted line in the figure), an external service unit, in the following called the database 2 (to the right of the dotted line) and the recipient's subsystem
- 10 3 (below the dotted line). The subsystem 1 comprises one or more units for which the following definitions apply: computer 4, scanner 5, server 6 including requisite memory units, accounting system 7, printer 8, control unit 9 for correspondence and its distribution.
- 15 Within the sender's subsystem 1 there can be several of these units. Some units can be omitted, while other types of unit for data processing and storage can be included. However, it is necessary for there to be units for entering electronic data into the control
- 20 unit 9 and at least one printer 8 connected to this. Concerning the accounting system 7, this can be designated as a function within the system and does not need to be regarded as a separate hardware unit but can be integrated into the rest of the data processing
- 25 system. In this case the function is to comprise the ability to enter financial data, storage and processing of this and output of the data which is produced from the entered material by means of the data processing.
- 30 The database 2 is intended to comprise a service unit which can be used by several subsystems 1 on the premises of the companies and institutions. The database is connected to control units in the connected subsystems via connections 15, which can be cable links
- 35 or wireless connections and preferably a connection via some available data network.

The database 2 comprises a data register 16 with an advanced search function for searching and extracting data from a large quantity of stored data. A connection unit 17 is connected to the incoming connection 15 from the subsystem 1 and to the data register 16 and also to outgoing connections 18, 19 and 20. In addition it is assumed that the connection unit is connected to one or more computers 21 with monitors and keyboards for human interface.

10

The sender's subsystem 1 and the database are designed for communication to a number of recipients, which in the figure are represented by the subsystem 3. These recipient systems can have different equipment for the reception of correspondence. The different reception units which can occur are represented in Figure 1 by the following definitions: incoming postbox 25 for postal correspondence, fax machine 26, printer 27 connected to a computer for the reception of e-mail, and a data storage and data processing unit 28 for the reception of data in accordance with special addressing and activation codifying. Different recipient systems can therefore have a greater or lesser extent, from the case where it is only possible to use the postal services for document-based communication which is to be registered, to the case where there is a comprehensively developed system with special addressing and activation functions in unit 28. Examples of such functions are transfers between accounts in different banks where a codified remote message triggers the transactions with account entry and subsequent confirmation operations. The different extent of the subsystems 3 on the premises of the respective prospective recipients is the reason for the abovementioned uncertainty regarding which means of distribution can be used by the user.

35

As mentioned, the database is connected to the control unit 9, which in turn is connected for the reception of data produced in the user system's data system and arranged to control the printer 8. The control unit 9 is thereby arranged to transmit the received information via the line 15 to the control unit 17 of the database 2 during breaks in the transmission of this data to the printer. The transmission to the database initiates a search process in the register unit 16. This is arranged to search for correspondences for the addressee identifications included in data obtained from the control unit 9, in particular name and address information, and if these do not contain relevant electronic address information, to search for such information.

The process described can result either in a relevant electronic address being found from the identification data obtained from the control unit 9 or by the search process, or in no such data being found. If there is an electronic address the database takes over the forwarding, which is carried out electronically via the addressable data system 28, e-mail 27 or fax 26 in that order of priority. If no electronic address can be found, the received data is returned to the control unit 9 and forwarded to the printer 8, which is activated to print out the corresponding document for delivery by post.

Directory information in the database can be obtained from a number of media such as telephone directories, fax directories, e-mail directories, official directories, etc., which generally are available in digital form, often via CD-ROM. As far as possible each address is supplemented with its address(es) for electronic communication: electronic addressing unit 28 with its codes, e-mail address or fax number.

If no useable electronic address can be found, distribution to the incoming postbox 25 must take place from the sender system's printer 8 via the normal postal service. In other words, the correspondence in question must be printed out using the printer 8 and sent to the recipient by post as a letter. Other communication to the recipient, which is electronic, is sent as mentioned via the database 2. Accordingly the fax 26 is shown connected to the connection unit 17 of the database by the line 18 via the printer-computer 27 by the line 19 and to the addressable computer system 28 by the line 20. Like the connection 15 these connections can be via cable or wireless and preferably by means of some established data network.

In the function for the intended debiting procedure the control unit 9 constitutes a key element for the implementation of the method according to the invention. It is connected to the server 6 for the reception of data in such a form that it can control the printer 8 for the printing out of documents. Such documents are assumed here to be invoices or other payment demands, which are produced in the sender's subsystem 1. Such production can be implemented in various ways: by manual entry of data via the computer 4, by scanning of documents in the scanner 5 and/or by obtaining it from the accounting system 7. Sources of data to be entered in the accounting system can be of various kinds, such as delivery notes, work reports and incoming debits from sub-suppliers, which in turn can already be recorded in a form suitable for entry and can have been produced in the computer or scanner, for example. In addition the control unit 9 is connected to the printer 8 for the production of documents in such a form that they can be sent by post. As mentioned, the control unit is connected to the database 2 and its connection unit 17 by means of the connection 15.

For a debiting procedure the following operations are carried out:

Entered data from the server to the control unit 9 is forwarded via the connection 15 to the database 2 during a temporary break in the connection from the control unit 9 to the printer 8. After entry, addressing data incorporated in the produced and transmitted data quantity is sent to the data register 16 for activation of its search function. The data which is found in the register comprises name and address information for the circle of addressees within the territory which is covered by the agreed service via the database 2. If any electronic addressing capabilities are found for the recipients in question during the searching this is selected with prioritizing of the connection via the addressable unit 28 and thereafter via e-mail and finally by fax. If any of these capabilities are available the database 2 produces from the quantity of data received from the control unit 9 an invoice for the electronic distribution which has been decided upon. The abovementioned data is supplemented by already entered data from the sender for printing out a complete invoice with the sender's logo, etc. In addition it is assumed that text will be included which provides information to the effect that the communication corresponds to the sending of an original invoice and that there will be no delivery by post.

30

A precondition for this operation being able to be carried out is that an electronic address for the recipient in question is found by the search. As, if such is the case, the electronically transmitted invoice is to replace the postal service, the control unit ensures that no data is supplied to the printer 8 so that no postal delivery takes place. However, if no electronic address is found by the search, the data

35

quantity is returned to the control unit for forwarding to the printer 8. The document thus produced is handled in the normal way for postal delivery. Finally a report is sent from the database to the sender's accounting system 7 stating that the invoice has been sent and which communication medium was used.

This use of the method using the control unit and the database is given as an example of the use for debiting. There is, however, no reason why it cannot be used for other correspondence, for example for follow-up measures to debiting, such as reminders and dunning letters. However, it can also be used for other correspondence where the sender cannot immediately find which distribution paths are available and where electronic transmission is preferable to the postal service.

Within the scope of the invention it is also the case that the control unit 9 can be extended to include additional functions. An example of such a function is that it is equipped for the programming of particular functions. For example, it is possible for the printer 8 only to be used temporarily for a certain function, for example invoicing, and otherwise to have a more general use. For this it is expedient for there to be a program which is activated so that the abovementioned function of the control unit can be put into effect, that is alternative production of printed communication or electronic communication via the database 2. When this program is not activated the printer is connected directly to the server or other unit in the sender's subsystem for normal printer applications. If, however, the abovementioned program is put into effect, this can also comprise the abovementioned supplementary data for creating a document in those instances when it is preferred to transmit the company logo or other information for printing out by the printer instead of

using pre-printed headed paper or forms. As mentioned, it is assumed that such supplementary data will be able to be entered in the database but it can also be found in a data program for activation of the printer by means of the control unit. Activation of the control unit will also mean that the abovementioned reporting function and updating of the accounting system 7 are maintained in the event of invoicing and other accounting measures.

10

Activation of the programs which it is wished to use in the sender's subsystem can of course be carried out by command via, for example, the computer 4 or via a keyboard connected directly to the control unit.

15

Another way is to connect in a diskette or CD-ROM containing the program in question. A further possibility which is also envisaged, is to provide the control unit or a unit connected to this with a card reader. Using cards from which the program can be read off or activated from a memory, the required function can be ensured by reading the relevant cards. The cards can be clearly marked so that no errors occur, which is important particularly in connection with accounting. The cards can also be distributed only to authorized personnel, so that misuse, for example fraudulent debiting, can be prevented.

25

Figure 2 shows in greater detail how received correspondence can be handled according to the method in a subsystem 35 on the premises of the recipient (between and to the left of the dotted lines). Above the upper dotted line there are the distribution methods 25-28 as shown in figure 1 and which here symbolize the paths for the correspondence coming to the subsystem 35. Below the lower dotted line are the same distribution methods 25-28 but here symbolizing the paths for outgoing correspondence, which is occasioned by the respective incoming correspondence.

30

35

To the right of the dotted vertical line is the database 2. The subsystem 1 for outgoing correspondence is indicated by a box outlined by dotted lines. It can be assumed that most of the users of the method and the
5 system will have the need to be able both to send and receive correspondence. Here separate systems are described for these functions but in practice it can be expected that they will be integrated with each other to form a complete correspondence system which can be
10 designated 1,35.

The units incorporated in the subsystem 35 can be defined in the following way: a sorting station 36 to which postal correspondence 25, fax messages 26 and
15 e-mails 27 are directed. The incoming material is then sorted, which can be assumed to be carried out manually, into mail that is to be processed by some employee, see the box 37, and mail where the data it contains can be entered via, for example, a computer
20 into a server 38 for the storage of data for processing internally. Such data can, for example, be information from incoming invoices which is recorded manually. Such data can also arrive at the server 38 from employees, box 37.

25 Electronically addressable data, box 28, is assumed to be entered in the server for data processing directly, without going via the sorting station 36. As indicated by the arrow 40 it is assumed that the server 38 is
30 connected to the subsystem 1 for the production and dispatch of correspondence, cf. the situation in figure 1. It is therefore possible for the server functions for 6 and 38 to be processed and stored in the same unit.

35 What has been described so far concerns the purely internal handling. If, however, the database 2 is also used for handling incoming data, the sorting station 36

is to be connected to the database 2 directly or via a scanner 41. At least to a certain extent addressable messages are thereby also taken via the distribution path 28 to the database 2 for transmission via this to the server. Employees, box 37, are also connected to the database directly or possibly also via a scanner. The database 2 is preferably arranged for such data processing so that at least to a certain extent scanner messages can be analysed (OCR function) for the production of, for example, sender identification for further automatic data processing where such is possible. When such data is produced it is transmitted to the correspondence system 1,35 for registration.

For the distribution paths for outgoing correspondence, see the lower boxes 25-28, it is the case that what was stated in connection with the description of Figure 1 applies. It is assumed, as for the previous example, that correspondence via the postal services is prepared internally within the company via a combination of the control unit 9 and the printer 8. In addition it can be assumed that a fax machine 26 is available and also sending capabilities for e-mail 27 and possibly also addressable transmission capabilities 28. It can therefore be expected that the employees, box 37, often send their correspondence via one of the abovementioned distribution paths without making use of the database. However, if it is wished to use the database in the way described above for the selection of the distribution path, this requires a direct connection to the database or a connection via a scanner. The server 38 is also assumed to have a bi-directional connection with the database 2, suitably as in the first example via a control unit such as the control unit 9.

Data can thus arrive at the database 2 from various sources: from a system 28 for addressable electronic messages, from the sorting station 36 either directly

or via a scanner, from the employee, box 37, and from the server 38 directly or via a control unit. For data arriving from the sorting station 36 and/or the employee or from the server 38 and then via a control
5 unit, the task of the database is to carry out the described search operation and implement distribution in the way described in connection with figure 1.

Several benefits are gained by means of the method and
10 the system according to the invention. We have already pointed out the ability to select the most advantageous distribution path in a simple way by making use of an automatic process controlled by the separate database equipped with search functions for addresses in a
15 comprehensive address directory. This handling can be expected to provide the impetus for the user's network of contacts to change over to electronic communication, whereby an even larger circle is created within which this rational means of communication is used regularly.

20 It should be added that the use of the database for distribution, both the internally initiated distribution and the distribution initiated by the incoming correspondence, can constitute a reason for
25 transferring additional services to the database. By means of the channels of communication which are set up, it can be expedient to carry out book-keeping by means of the organization of the database, which particularly for smaller companies can result in lower
30 handling costs, greater security and reduced need for personnel than with corresponding internal financial handling.

The description above is based on the fact that the
35 printer 8 for the printing out of documents which are to be sent by post is situated in connection with the sender system 1 rather than closely connected to the database 2. The control unit 9 can thereby operate in

such a way that the database only handles electronic distribution of the computerized information, while on the other hand information which is to be sent by post is handled by the sender system's printer 8, so that a document is produced which can be handed to the postal services on the part of the sender system. This can be a suitable embodiment of the invention, particularly if there is a large quantity of transmissions in document form via post or in some other way such as by courier, for which electronic addressing is not applicable. For example, the addressees concerned may not have fax or an e-mail address or the consignments can largely concern original documents.

Within the scope of the invention the system procedure can, however, be such that one or more printers are connected to the database, so that the control unit or other control function connected to the database activates the connected printer for the printing out of the documents for which searching in the database's address directory reveals that there is no address for electronic distribution available. The document can then be processed for forwarding as a service within the database.

This can be the most suitable embodiment when it is not wished to process some document consignments within the sender system.

Of course data for the document consignments which are not processed within the user system must be reported to the relevant function address in the same.

PATENT CLAIMS

- 5 1. Method for computer-controlled distribution of
information via a number of different communication
systems from a computer-based user system (1) within a
correspondence system (1,35) arranged for the
production of electronic data for the control of a
10 number of printers (8) by means of which documents can
be produced with information corresponding to the
abovementioned electronic data, characterized in that a
control unit (9) is arranged in the respective
transmission line for the abovementioned electronic
15 data to the respective printer (8), which control unit
upon activation receives this data intended for the
printer and transfers it to a database (2) arranged for
the purpose during a break in the transmission of the
abovementioned data to the printer (8), where the
20 database, which is provided with a comprehensive
directory (16) of addresses including electronic
addresses where available, searches for an adequate
electronic address in the address directory if such
address is available, on the basis of the relevant
25 recipient identification transmitted from the sender
system (1) via the control unit (9), after which the
information is transmitted to the address in question
via electronic distribution, while for data concerning
recipient identification transmitted to the database
30 for which an electronic address cannot be found, the
abovementioned data intended for the respective printer
(8) is transmitted to the printer for the printing out
of documents which can be sent by post.
- 35 2. Method according to Claim 1, characterized in that
the database (2) in connection with the abovementioned
distribution to the correspondence system (1,35)
transmits data concerning information transmission to

the correspondence system (1,35) for further data processing.

3. Method according to Claim 1 or 2, characterized in
5 that the correspondence system (1,35) within a
subsystem (35) for the reception of correspondence
carries out sorting of the incoming correspondence for
information suitable for automatic data processing and
transfers it electronically to the database (2) for
10 data processing such as supplementing with electronic
addresses produced from its directory (16).

4. Method of computer-controlled distribution of
information via a number of different communication
15 systems from a computer-based sender system (1) within
a correspondence system (1,35) arranged for the
production of electronic data related to the
abovementioned information and from which data
information carriers are produced for the
20 abovementioned distribution, characterized in that the
abovementioned data is transmitted to a database (2)
arranged for the purpose, where the database which is
provided with a comprehensive directory (16) of
addresses including electronic addresses where
25 available, obtains an adequate electronic address in
the address directory if such address is available, on
the basis of the relevant recipient identification
transmitted from the sender system (1) via the control
unit (9), after which the information is transmitted to
30 the address in question via electronic distribution,
while for data concerning recipient identification
transmitted to the database for which an electronic
address cannot be obtained, the abovementioned data is
transmitted to a printer (8) for the printing out of
35 documents which can be distributed by post.

5. Method according to Claim 4, characterized in that
the database (2) in connection with the abovementioned

distribution transmits data concerning information transmission to the correspondence system (1,35) for further data processing.

5 6. Method according to Claim 4 or 5, characterized in that the correspondence system (1,35) within a subsystem (35) for the reception of correspondence carries out sorting of the incoming correspondence for information suitable for automatic data processing and
10 transfers it electronically to the database (2) for data processing, such as supplementing with electronic addresses produced from its directory (16).

7. System for computer-controlled distribution of
15 information via a number of different communication systems utilizing the method according to any of Claims 1-3, characterized in that its correspondence system (1,35) comprises a computer-based sender system (1) which is arranged for the production of electronic
20 data, a number of printers (8) arranged for the production of documents with information corresponding to the abovementioned electronic data, a control unit (9) arranged in the respective transmission line for the abovementioned electronic data to the
25 abovementioned printers (8), a database (2) provided with a comprehensive directory (16) of addresses, where the control unit (9) is arranged upon activation to receive data intended for the printer and transfer it to the database during a break in the transmission of
30 the abovementioned data to the printer, with the database arranged to obtain an adequate electronic address upon the reception of the abovementioned data if such address is available and to transmit the information to the address in question via electronic
35 distribution, while for data concerning recipient identification transmitted to the database for which an electronic address cannot be obtained, the database is arranged to transmit the abovementioned data to the

respective printer for the printing out of documents which can be sent by post.

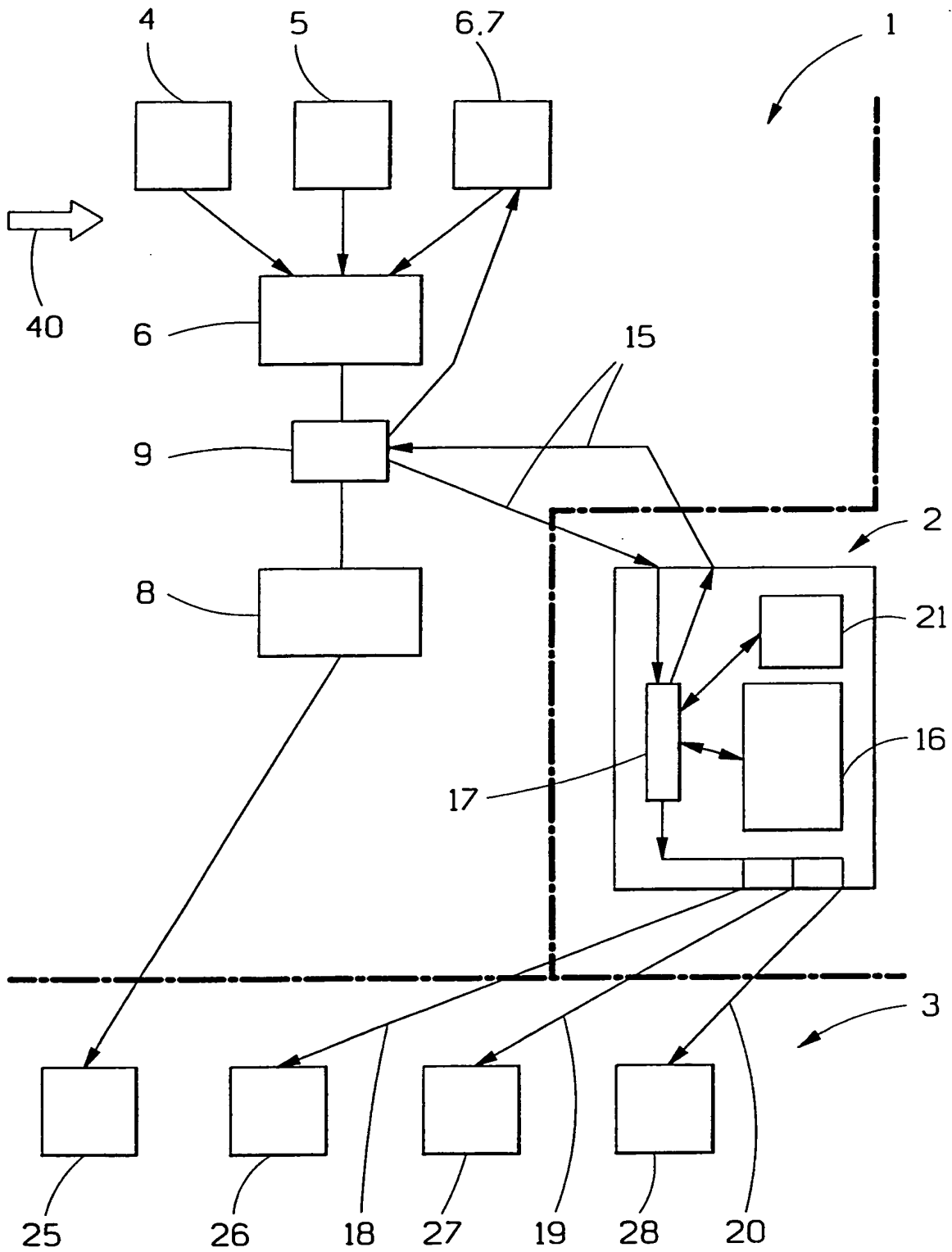
8. System according to Claim 7, characterized in that
5 the correspondence system (1,35) comprises a subsystem (35) for the reception of correspondence, which subsystem comprises a sorting station (36) arranged for the reception of correspondence via the available distribution channels (25, 26, 27, 28) and for sorting
10 such correspondence that is suitable for automatic data processing, such as supplementing with electronic address, and arranged with a data link for transmission to the database (2) of data concerning such correspondence for further data processing and
15 returning to the correspondence system (1,35) for registering and further processing.

9. System for the distribution of information via a number of different communication systems utilizing the
20 method according to any of Claims 4-6, characterized in that its correspondence system (1,35) comprises a computer-based sender system (1) which is arranged for the production of electronic data related to the abovementioned information and from which data
25 information carriers are produced for the abovementioned distribution, a database (2) provided with a comprehensive directory (16) of addresses including electronic addresses where available, at least one printer (8) connected to the database (2) for
30 documents, with the database arranged to receive the abovementioned data and search in the directory for an adequate electronic address if such address is available and to transmit the information to the address in question via electronic distribution, while
35 for data concerning recipient identification transmitted to the database for which an electronic address cannot be obtained, the database is arranged to transmit the abovementioned data to the abovementioned

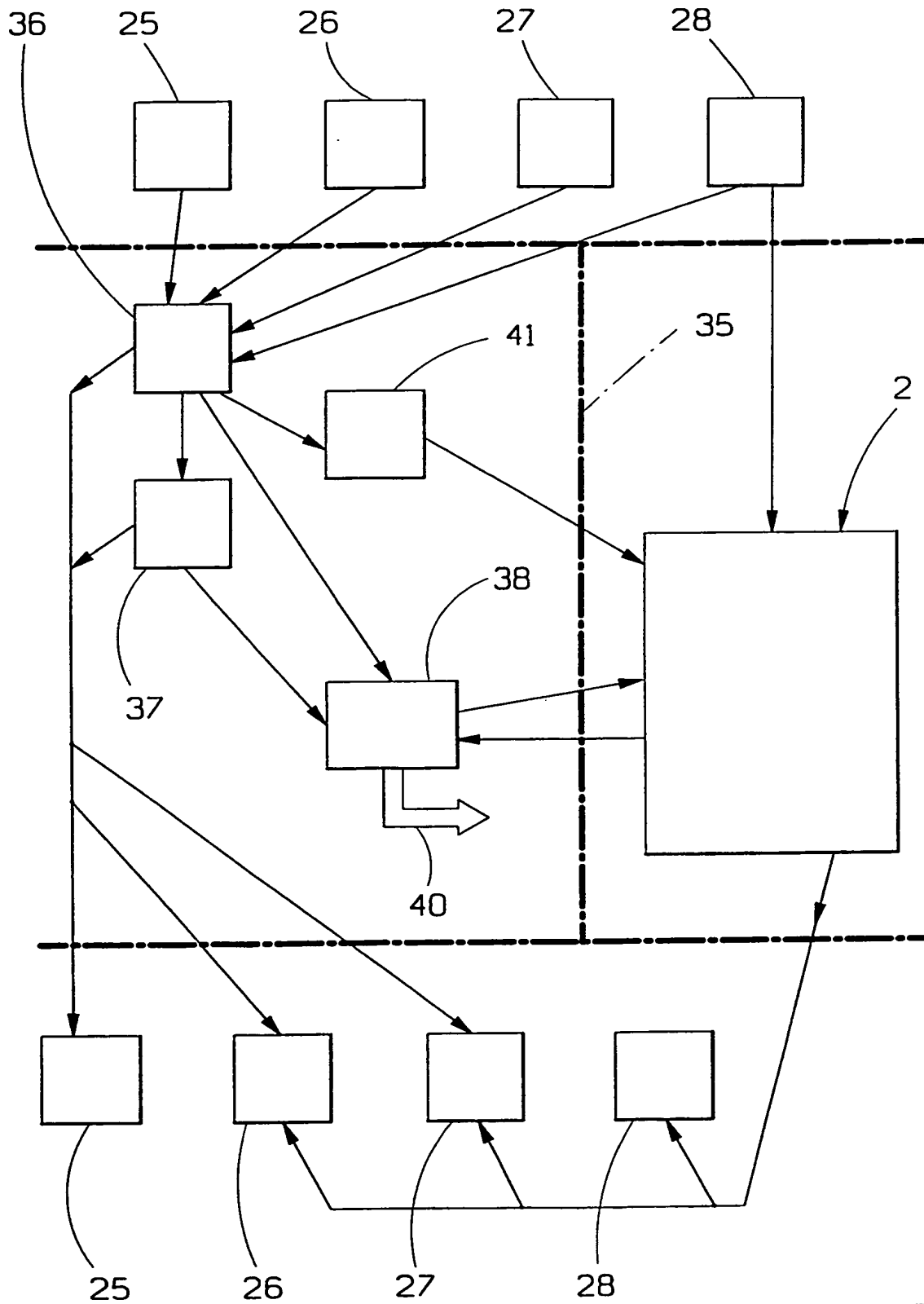
printer (8) for the printing out of documents which can be distributed by post.

10. System according to Claim 9, characterized in that
5 the correspondence system (1,35) comprises a subsystem
(35) for the reception of correspondence, which
subsystem comprises a sorting station (36) arranged for
the reception of correspondence via the available
distribution channels (25, 26, 27, 28) and for sorting
10 such correspondence which is suitable for automatic
data processing, such as supplementing with electronic
address, and arranged with a data link for transmission
to the database (2) of data concerning such
correspondence for further data processing and
15 returning to the correspondence system (1,35) for
registering and further processing.

1/2

FIG.1

2/2

FIG.2

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 00/00565

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: G06F 17/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4713780 A (THOMAS G. SCHULTZ ET AL), 15 December 1987 (15.12.87) --	1-10
A	WO 96/24104 A1 (FERAG AG), 8 August 1996 (08.08.96) -- -----	1-10

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"I" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

26 June 2000

Date of mailing of the international search report

20 -07- 2000

Name and mailing address of the ISA/

Swedish Patent Office
Box 5055, S-102 42 STOCKHOLM

Facsimile No. +46 8 666 02 86

Authorized officer

JAN SILFVERLING/EE

Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

Information on patent family members

02/12/99

International application No.

PCT/SE 00/00565

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4713780 A	15/12/87	NONE	
WO 96/24104 A1	08/08/96	NONE	

RECORD COPY

PCT

REQUEST

The undersigned request that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

PCT/SE 00 / 0 0 5 6 5

International Filing Date

23-03-2000

Name of receiving Office and PCT International Application

The Swedish Patent Office
PCT International Application

Applicant's or agent's file reference 111433 AM
(if desired) (12 characters maximum)

Box No. I TITLE OF INVENTION

A method for computer controlled distribution of information over a number of different communication systems and a system for the accomplishment of the method.

Box No. II APPLICANT

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.)

WebGiro AB
Box 1146
SE-181 23 LIDINGÖ
Sweden

☐ This person is also inventor.

Telephone No.

Facsimile No.

Teleprinter No.

State (that is, country) of nationality: Sweden

State (that is, country) of residence: Sweden

This person is the applicant for the purposes of:

☐

all designated States

☒

all designated States except the United States of America

☐

the United States of America only

☐

the States indicated in the Supplemental Box

Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.)

PRYTZ Sven
Ängsklockevägen 26
SE-181 57 LIDINGÖ
Sweden

This person is:

☐ applicant only

☒ applicant and inventor

☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality: Sweden

State (that is, country) of residence: Sweden

This person is the applicant for the purposes of:

☐

all designated States

☐

all designated States except the United States of America

☒

the United States of America only

☐

the States indicated in the Supplemental Box

☐ Further applicants and/or (further) inventors are indicated on a continuation sheet.

Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby appointed to act on behalf of the applicant(s) before the competent International Authorities as:

☒

agent

☐

common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

ANDERSSON Per, BERGQUIST Gunnar, BRUN Jonny, GRAUDUMS Valdis, HARRISON Michael, MOSSMARK Anders, OLSSON Stefan, ROMARE Anette, ROSANDER Bengt, SCHLOSSMAN Ulf, SÖRSDAHL Petter

ALBIHNS PATENTBYRÅ GÖTEBORG AB,

P.O. Box 142,

S-401 22 GÖTEBORG, Sweden

Telephone No.

+46 31 725 81 00

Facsimile No.

+46 31 711 95 55

Teleprinter No.

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Box No. V DESIGNATION OF STATES

The following designations are hereby made under Rule 4.9(a) (mark the applicable check-boxes; at least one must be marked):

Regional Patent

- ☒ **AP ARIPO Patent:** GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SL Sierra Leone, SZ Swaziland, TZ United Republic of Tanzania, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting state of the Harare Protocol and of the PCT
- ☒ **EA Eurasian Patent:** AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ **EP European Patent:** AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is Contracting State of the European Patent Convention and of the PCT
- ☒ **OA OAPI Patent:** BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line).....

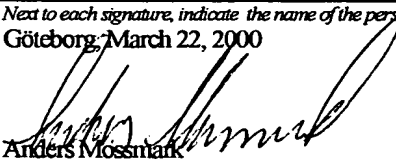
National Patent (if other kind of protection or treatment desired, specify on dotted line):

- | | |
|--|---|
| <input checked="" type="checkbox"/> AL Albania | <input checked="" type="checkbox"/> LR Liberia |
| <input checked="" type="checkbox"/> AM Armenia | <input checked="" type="checkbox"/> LT Lithuania |
| <input checked="" type="checkbox"/> AT Austria | <input checked="" type="checkbox"/> LU Luxembourg |
| <input checked="" type="checkbox"/> AU Australia | <input checked="" type="checkbox"/> LV Latvia |
| <input checked="" type="checkbox"/> AZ Azerbaijan | <input checked="" type="checkbox"/> MA Morocco |
| <input checked="" type="checkbox"/> BA Bosnia and Herzegovina | <input checked="" type="checkbox"/> MG Madagascar..... |
| <input checked="" type="checkbox"/> BB Barbados | <input checked="" type="checkbox"/> MK The former Yugoslav Republic of Macedonia |
| <input checked="" type="checkbox"/> BG Bulgaria | <input checked="" type="checkbox"/> MN Mongolia |
| <input checked="" type="checkbox"/> BR Brazil | <input checked="" type="checkbox"/> MW Malawi |
| <input checked="" type="checkbox"/> BY Belarus | <input checked="" type="checkbox"/> MX Mexico |
| <input checked="" type="checkbox"/> CA Canada | <input checked="" type="checkbox"/> NO Norway |
| <input checked="" type="checkbox"/> CH and LI Switzerland and Liechtenstein | <input checked="" type="checkbox"/> NZ New Zealand..... |
| <input checked="" type="checkbox"/> CN China | <input checked="" type="checkbox"/> PL Poland |
| <input checked="" type="checkbox"/> CR Costa Rica | <input checked="" type="checkbox"/> PT Portugal..... |
| <input checked="" type="checkbox"/> CU Cuba | <input checked="" type="checkbox"/> RO Romania |
| <input checked="" type="checkbox"/> CZ Czech Republic | <input checked="" type="checkbox"/> RU Russian Federation..... |
| <input checked="" type="checkbox"/> DE Germany | <input checked="" type="checkbox"/> SD Sudan |
| <input checked="" type="checkbox"/> DK Denmark | <input checked="" type="checkbox"/> SE Sweden |
| <input checked="" type="checkbox"/> DM Dominica | <input checked="" type="checkbox"/> SG Singapore |
| <input checked="" type="checkbox"/> EE Estonia | <input checked="" type="checkbox"/> SI Slovenia..... |
| <input checked="" type="checkbox"/> ES Spain..... | <input checked="" type="checkbox"/> SK Slovakia..... |
| <input checked="" type="checkbox"/> FI Finland..... | <input checked="" type="checkbox"/> SL Sierra Leone |
| <input checked="" type="checkbox"/> GB United Kingdom | <input checked="" type="checkbox"/> TJ Tajikistan..... |
| <input checked="" type="checkbox"/> GD Grenada | <input checked="" type="checkbox"/> TM Turkmenistan..... |
| <input checked="" type="checkbox"/> GE Georgia | <input checked="" type="checkbox"/> TR Turkey |
| <input checked="" type="checkbox"/> GH Ghana | <input checked="" type="checkbox"/> TT Trinidad and Tobago |
| <input checked="" type="checkbox"/> GM Gambia | <input checked="" type="checkbox"/> UA Ukraine..... |
| <input checked="" type="checkbox"/> HR Croatia | <input checked="" type="checkbox"/> UG Uganda |
| <input checked="" type="checkbox"/> HU Hungary | <input checked="" type="checkbox"/> US United States of America..... |
| <input checked="" type="checkbox"/> ID Indonesia | <input checked="" type="checkbox"/> UZ Uzbekistan..... |
| <input checked="" type="checkbox"/> IL Israel..... | <input checked="" type="checkbox"/> VN Viet Nam |
| <input checked="" type="checkbox"/> IN India | <input checked="" type="checkbox"/> YU Yugoslavia..... |
| <input checked="" type="checkbox"/> IS Iceland | <input checked="" type="checkbox"/> ZW Zimbabwe..... |
| <input checked="" type="checkbox"/> JP Japan..... | |
| <input checked="" type="checkbox"/> KE Kenya | |
| <input checked="" type="checkbox"/> KG Kyrgyzstan..... | |
| <input checked="" type="checkbox"/> KP Demoratic People's Republic of Korea..... | |
| <input checked="" type="checkbox"/> KR Republic of Korea | |
| <input checked="" type="checkbox"/> KZ Kazakstan | |
| <input checked="" type="checkbox"/> LC Saint Lucia | |
| <input checked="" type="checkbox"/> LK Sri Lanka | |

Check boxes reserved for designating States (for the purposes of a national patent) which have become party to the PCT after issuance of this sheet:

- ☒ **AE** United Arab Emirates
- ☒ **ZA** South Africa
- ☒ **LS** Lesotho
- ☒ **MD** Republic of Moldova
- ☒ **TZ** United Republic of Tanzania

Precautionary Designation Statement: In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation of a designation consists of the filing of a notice specifying that designation and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.)

Box No. VI PRIORITY CLAIM		<input type="checkbox"/> Further priority claims are indicated in the Supplemental Box		
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country:	regional application:* regional Office	international application: receiving Office
item (1) 24 March 1999 (24.03.1999)	9901069-6	Sweden		
item (2)				
item (3)				
<input checked="" type="checkbox"/> The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s): (1)				
<small>* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See supplemental Box.</small>				
Box No. VII INTERNATIONAL SEARCHING AUTHORITY				
Choice of International Searching Authority (ISA) (If two or more international Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used): ISA /SE		Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority): Date (day/month/year): Number Country (or regional Office)		
Box No. VIII CHECK LIST; LANGUAGE OF FILING				
This international application contains the following number of sheets: request: 3 ✓ description (excluding sequence listing part): 22 ✓ claims: 5 ✓ abstract: 1 ✓ drawings: 2 ✓ sequence listing part of description: _____ Total number of sheets: 33 ✓		This international application is accompanied by the item(s) marked below: 1. <input type="checkbox"/> fee calculation sheet 2. <input type="checkbox"/> separate signed power of attorney 3. <input type="checkbox"/> copy of general power of attorney; reference number, if any: 4. <input type="checkbox"/> statement explaining lack of signature 5. <input type="checkbox"/> priority document(s) identified in Box No. VI as item(s): 6. <input type="checkbox"/> translation of international application into (language): 7. <input type="checkbox"/> separate indications concerning deposited microorganism or other biological material 8. <input type="checkbox"/> nucleotide and/or amino acid sequence listing in computer readable form 9. <input checked="" type="checkbox"/> other (specify): Copy of Official Action in SE 9901069-6, will be sent separately.		
Figure of the drawings which should accompany the abstract: 1		Language of filing of the international application: Swedish		
Box No. IX SIGNATURE OR APPLICANT OR AGENT				
Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request). Göteborg, March 22, 2000  Anders Mossmark				

1. Date of actual receipt of the purported international application: 23-03-2000	2. Drawings: <input checked="" type="checkbox"/> received: <input type="checkbox"/> not received:
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:	
4. Date of timely receipt of the required corrections under PCT-Article 11(2):	
5. International Searching Authority (if two or more are competent): ISA/ SE	
6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid	

Date of receipt of the record copy by the International Bureau:	15 MAY 2000	For International Bureau use only (15.05.00)
---	--------------------	--

12-05-2000

1/2

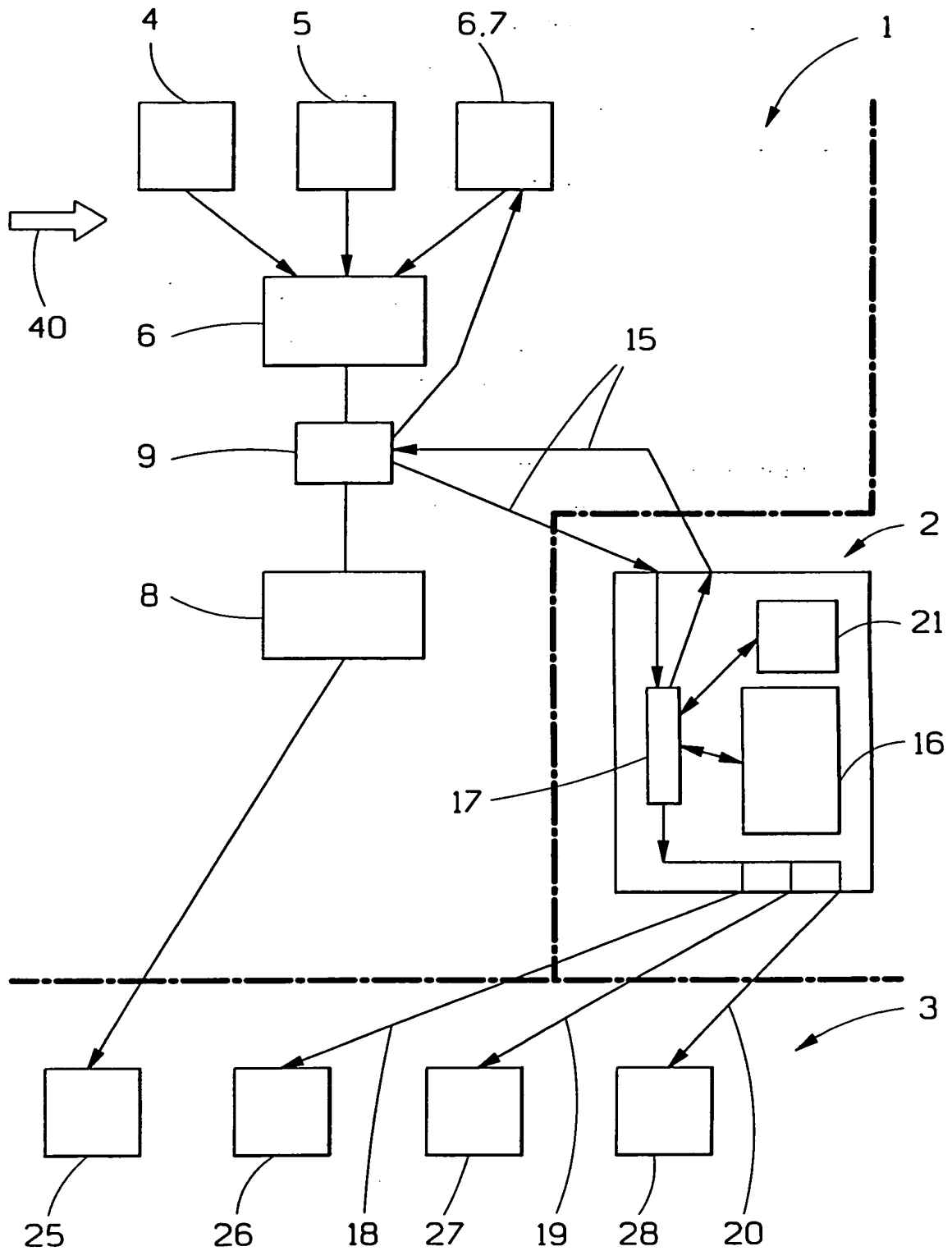


FIG.1

2/2

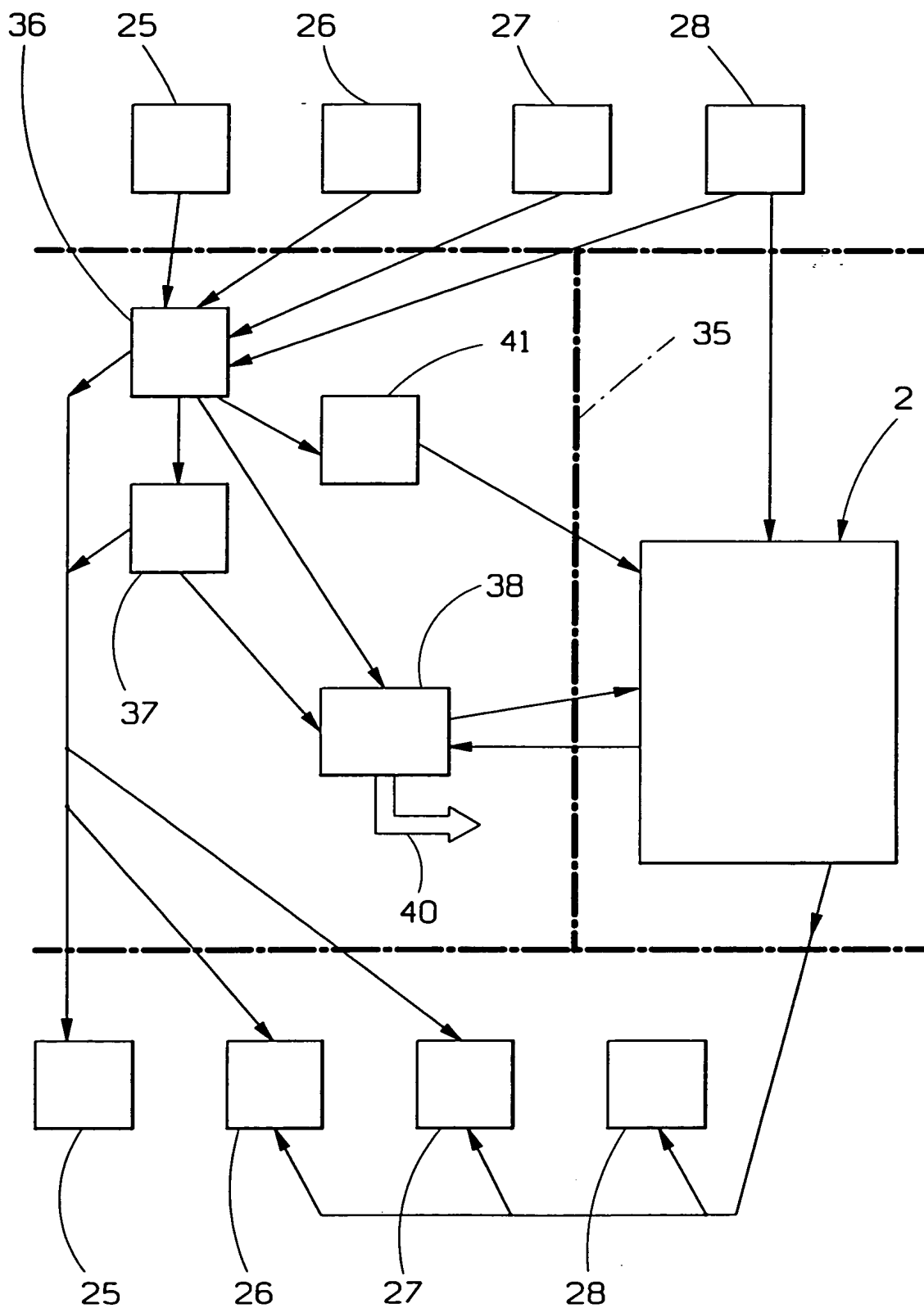


FIG.2

5 2000 mars

Ref. WG990209PCT

TITEL:

Förfarande för datorstyrd distribution av information
via ett antal olika kommunikationssystem samt system
10 för tillämpning av förfarandet.

TEKNISKT OMRÅDE:

Uppfinningen hänför sig till ett förfarande för
datorstyrd distribution av information via ett antal
15 olika kommunikationssystem samt system för tillämpning
av förfarandet.

TEKNIKENS STÅNDPUNKT:

För överföring av dokumentär information mellan olika
20 parter såsom mellan olika företag eller mellan företag
och privatpersoner finns i huvudsak två distributions-
system tillgängliga, nämligen via brevpost och via
elektronisk dokumentär överföring såsom via telefax
eller e-post. Särskilt inom företagsvärlden önskar man
25 begränsa användningen av brevpost så mycket som
möjligt. Sådan resulterar i en omfattande pappershante-
ring och pappersåtgång, ej enbart för dokument utan
även för kuvert samtidigt som postbefordringsavgifterna
är avsevärda och postbefordran förhållandevis långsam
30 och ibland något osäker. Genom användning av telefax
minskas pappershanteringen och informationen når
mottagaren mycket snabbt och man kan dessutom i samband
med avsändandet få en kvittens på att informationen
kommit fram. E-post erbjuder ännu större fördelar. I
35 viss utsträckning kan informationsöverföringen ske helt
papperslöst, nämligen om den hos avsändaren skrivits in
i datorminnet samt överföres och avläses på datorns

5 bildskärm av mottagaren, som därvid kan avgöra om
meddelandet skall lagras elektroniskt, dokumentärt
eller överhuvudtaget ej sparas. En fördel som är unik
för e-post är att den elektroniskt lagrade informatio-
nen kan både hos avsändaren och mottagaren utnyttjas
10 för redigering, för transferering helt eller delvis
till register eller till arbetsfiler för att användas
för databehandling.

Trots att den elektroniska kommunikationen uppvisar
15 många och stora fördelar i förhållande till post-
distribution användes den senare fortfarande i stor
utsträckning, inte oväntat i stor utsträckning för
privatpost men även för avgående post hos företag, som
dock i allmänhet har utrustning för elektronisk
20 kommunikation.

Orsakerna till att den elektroniska kommunikationen
användes i begränsad utsträckning trots att utrustning
finns är flera. Det kommer troligtvis alltid att finnas
25 dokument, som endast lämpar sig för fysisk befordran,
främst originalmaterial såsom signerade, juridiska
handlingar och även material med stor omfattning, såsom
böcker och andra omfattande trycksaker. En orsak som
dock i stor utsträckning borde kunna elimineras är en
30 osäkerhet hos avsändaren om adressaten är inrättad för
att ta emot och behandla elektronisk förmedlad
information och i så fall genom vilken medium och under
vilken adress. Däremot har praktiskt taget varje
tänkbar kontakt en känd postadress, vilket gör att
35 postbefordran användes som ett obligatorium för en stor
del av korrespondensen. Som exempel kan nämnas att
myndigheter och institutioner såsom banker regelmässigt

5 använder sig av postbefordran för meddelanden, förelägganden, transaktionsbesked, kontobesked och framför allt för fakturor. Det trots allt relativt omfattande utnyttjandet av elektronisk kommunikation kommer däremot att bli begränsad till meddelanden mellan
10 företag och andra parter mellan vilka en nära samverkan och frekvent informationsutbyte föreligger.

Man kan således konstatera att inom företag, institutioner och myndigheter skulle stora vinster kunna göras
15 om postbefordran kunde ersättas med elektronisk kommunikation överallt där möjligheter finns att inrätta sådan. Vinsterna skulle därvid ej ligga enbart i att själva befordran blir rationell och med minsta möjliga manuella insats utan även genom att informationen hos avsändaren kan produceras på ett betydligt
20 rationellare sätt än vid postbefordran och framförallt genom att den hos mottagaren direkt kan utnyttjas som ett instrument för vidare databehandling och -lagring medan pappersdokument ofta måste överföras manuellt i
25 digital form för att kunna vidarebearbetas. Särskilt markant är detta vid ekonomihantering där de flesta företag idag gör sin bokföring, reskontraföring och ekonomirapportering genom maskinell databehandling. Därvid är det nödvändigt att pappersdokument såsom
30 fakturor, bankbesked mm måste lagras in manuellt för att integreras i databehandlingen.

REDOGÖRELSE FÖR UPPFINNINGEN:

Föreliggande uppfinning avser ett förfarande för datorstyrt val av distributionsvägar för information av
35 olika slag producerad hos en avsändare, på sådant sätt att den gynnsammast, tillgängliga distributionsvägen

5 väljes. Uppfinningen avser även ett kommunikations- och processsystem för genomförande av förfarandet.

Hos avsändaren produceras därvid i dataform den avsedda informationen och överföres till en "distributions-
10 växel", som självständigt analyserar informationen med avseende till mottagningsadress och art och på grundval av analysen väljer den mest gynnsamma kommunikations- vägen som kan utnyttjas och därefter sörjer för distributionen. Förfarandet och dess system för genom-
15 förandet skapar många möjligheter hos både avsändare och mottagare att höggradigt rationalisera produktion och vidare behandling av information.

En annan viktig fördel vid uppfinningen är att en hög
20 säkerhet mot felbehandling av data både hos avsändare och mottagare kan uppnås. Likaså kan en hög säkerhet uppnås mot feladressering och mot avtappning av information till obehörig part.

25 En ytterligare och mycket viktig fördel är att systemet kan införas och utnyttjas hos användaren utan någon omfattande installation och en stor del av det arbete i form av inlagring av grunddata ianspråkstagande av nya datorprogram och personalutbildning kan elimineras vid
30 förfarandet och systemet enligt uppfinningen.

FIGURBESKRIVNING:

I det följande beskrives förfarandet och systemet enligt uppfinningen med hänvisning till bifogade
35 ritningar, som schematiskt visar systemet.

- 5 Fig. 1 visar därvid ett blockschema över systemet i dess funktion vid produktion och distribution av information hos avsändaren; och
- Fig. 2 visar ett motsvarande blockschema avseende systemets funktion vid mottagande av
- 10 informationen.

FÖREDRAGNA UTFÖRINGSFORMER:

I det följande skall förfarandet och systemet beskrivas i ett användningsfall inriktat i första hand mot

15 ekonomihantering med tillhörande korrespondens inom ett företag eller institution. Nedan listas de väsentliga processer och därav föranledda dokument inom sådan ekonomihantering.

- 20 I. Debiteringsprocessen
1. Produktion av debiteringsunderlag på grundval av registrerade leveranser, utförda arbeten mm
 2. Fastställande av debiteringsdata
 - 25 a) adressat
 - b) specifikation
 - c) belopp
 - d) villkor
 3. Intern registrering av debiteringsdata för upprättande av:
 - 30 a) reskontra
 - b) betalningsbevakning
 - c) ekonomirapportering
 4. Produktion av faktura i den form som bestäms av distributionssättet (se 5 nedan)
 - 35

5 5. Distribution av faktura enligt något av
sätten:

- a) postbefordran
- b) med telefax
- c) med e-post via skrivare hos mottagaren
- 10 d) direkt elektronisk överföring av data
till datasystem hos mottagaren enligt
överenskommen adressering

II. Mottagningsprocessen

1. Ankomst av faktura/faktureringsdata via:

- 15 a) postbefordran
- b) telefax
- c) e-post medelst printer
- d) direkt inlagring av data i mottagarens
datasystem enligt överenskommen
20 adressering

2. Sortering av korrespondens enligt innehåll
såsom:

- a) betalningsförelägganden, t.ex. fakturor,
avgiftskrav
- 25 b) rapportering av ekonomidata gällande
erlagda betalningar, inkomna betalningar,
saldoställningar mm
- c) övrig ekonomirelaterad korrespondens
t.ex. förfrågningar om utfärdade fakturor,
30 offertbegäran, beställningar,
meddelande om betalningssvårigheter
- d) ej ekonomirelaterad korrespondens som
skall utlösa en åtgärdsprocess t.ex.
förelägganden och krav från myndighet
35 eller annan med utsatt svarsfrist
- e) ej ekonomirelaterad korrespondens av
allmän och informativ art

5

3. Intern distribution av ankommen

korrespondens i enlighet med indelningens
Sorteringsklasser (II.2 a-e)

Sorteringsklass enl. (2)

10

a,b) Registreras som ekonomiska data i det
interna ekonomisystemet, som
förutsättningsvis är datorbaserat

c) distribueras internt till avdelning/
person som har ansvar för ett område
till vilket frågan är relaterad

15

d) fristnoteras och distribueras till
ansvarig inom det område till vilket
åtgärden hänför sig

20

e) meddelanden med tänkbar relevans till
föreliggande verksamhet distribueras
till berörda avdelningars/personer för
kännedom och eventuell åtgärd

25

Som framgår kan ekonomirelaterad korre-
spondens (2a, b) efter sortering registreras
i mottagarens datorbaserade ekonomisystem
och föranleder relativt obetydlig manuell
hantering. Övrig korrespondens (2c,d,e) kan
ej rationaliseras i samma grad, den fordrar
praktiskt taget alltid personliga över-
väganden och åtgärder. Dock kan dator-
baserade hjälpmedel såsom för bevakning- och
påminnelsefunktioner, textbehandling mm
användas.

30

5 III. Processer föranledda av ankommande korrespondens

1. Betalningsprocesser, som genom korrekt inprogrammering efter ankomst av faktura eller annat betalningsföreläggande
10 registrerats i datorbaserat ekonomisystem kan utlösas automatiskt såsom via bank, bankgiro eller postgiro
2. Ekonomirapportering som vid väl utbyggt datorbaserat ekonomisystem kan framtagas
15 medelst anpassat datorprogram
3. Uppföljning av ekonomirapporteringen efter genomgång. Kan föranleda om disponering av medel, upptagning eller betalning av lån, omläggning av viss verksamhet och andra
20 åtgärder som i allmänhet faller under företagsledningens ansvarsområde. Endast i begränsad utsträckning kan datorbaserade hjälpmedel utnyttjas.
4. Ej ekonomirelaterad korrespondens. Endast
25 för viss verksamhet med väl etablerade rutiner som utnyttjas frekvent kan en datorstyrning liknande ekonomistyrning tillämpas. Dock finns i allmänhet behov av datorbaserade hjälpmedel.

30 Som framgår av föregående uppställning finns stora möjligheter att rationalisera Debiteringsprocessen (I) genom maskinell databehandling. Den första förutsättningen
35 härför är att avsändaren har tillgång till ett datorbaserat ekonomisystem och dataprogram för erforderliga processer. Så är också fallet vid

5 stora företag och i allt större utsträckning
även vid mindre företag och alltid vid företag
och institutioner med omfattande ekonomi-
hantering, såsom banker, försäkringsbolag och
vissa myndigheter. Dock har ofullständigt
10 rationaliserats distributionen (I.5) av
fakturor och andra betalningsförelägganden.
emedan man här blir beroende av adressatens
mottagningsmöjligheter och vilken kännedom man
har om dessa. När det gäller mottagen
15 korrespondens (II) är man ävenledes beroende av
det korrespondensmedium som avsändaren använder
och som nämnts kan en avsändare ofta ej
utnyttja den mest rationella distributions-
kanalen på grund av osäkerheten om tillgängliga
20 distributionsmedel. Detta innebär givetvis att
mottagen korrespondens i sin form kommer att
bestämmas av denna osäkerhet. Om distributionen
sker på ett ej elektronikbaserat, mindre
rationellt sätt påverkar det negativt även
25 rationaliseringsmöjligheterna för sorteringen
(II.2) och påverkar även registreringen in i
det datorbaserade ekonomisystemet (II.3,a och
b) så att manuella insatser måste göras. När
väl registrering i ekonomisystemet skett kan
30 efterföljande ekonomiåtgärder (III.1,2)
genomföras rationellt om ekonomisystemet är
utbyggt härför.

Ekonomihanteringen inom företag och institutioner är i
35 och för sig väl lämpad för datorunderstödd rationa-
lisering, vilket även visas av att sådan rationali-
sering så relativt snabbt och i så stor omfattning

5 genomförts just inom ekonomiområdet. Det främsta
hindret för en optimal rationalisering är, som torde
framgå av föregående uppställning, bristen i rationa-
lisering av distributionen av den ekonomirelaterade
korrespondensen. Ett annat hinder särskilt relaterat
10 till mindre företag är att investeringsmedel och tid
saknas för inrättande av ett väl utbyggt ekonomisystem.

Även om ekonomihantering här nämnes som ett område väl
anpassat till utnyttjande av uppfinningen, utesluter ej
15 detta att det finns andra områden där upprepade rutiner
förekommer. Som exempel kan nämnas vid bokning av
biljetter och beställning av varor.

Övrig avsänd och mottagen korrespondens, som ej är
20 grundad på fasta, återupprepningsbara rutiner liksom
den ekonomirelaterade ger ej alls samma möjligheter
till rationalisering emedan den i hög grad fordrar
personliga avgöranden och åtgärder. Här torde man även
fortsatt i stor utsträckning få nöja sig med utnytt-
25 jande av tillgängliga hjälpmedel i rationaliserings-
processen, såsom datorbaserade informationssystem,
datorbaserade styrhjälpmedel mm. Även här kan dock en
viktig rationaliseringsfaktor vara att rationell
distribution utnyttjas. Så sker också i allt större
30 utsträckning med hjälp av telefax och e-post. Dock
gäller även här de begränsningar som uppkommer på grund
av att man ej vet vilka mottagningsmöjligheter mottaga-
ren har, varigenom kostsam och långsam postbefordran
måste tillgripas.

35

I det följande skall nu beskrivas systemet och i
samband därmed förfarandet enligt uppfinningen vid

5 genomförande av Debiteringsprocesser. Därvid hänvisas först till blockschemat i fig. 1.

I detta visas ett system omfattande tre huvudenheter: Avsändarpartens delsystem 1 (ovanför och till vänster
10 om den streckprickade linjen i figuren), en extern servisenhet, i det följande kallad databasen 2 (till höger om den streckprickade linjen) och mottagarens delsystem 3 (under den streckprickade linjen). Delsystemet 1 innefattar ett eller flera exemplar av
15 enheter för vilka följande definitioner gäller:

Dator 4, scanner 5, server 6 inklusive erforderliga minnesenheter, ekonomisystem 7, skrivare 8, styrenhet 9 för korrespondens och dennas distribution. Inom
20 avsändarens delsystem 1 kan således finnas flera exemplar av dessa enheter. Alternativt kan någon enhet uteslutas respektive kan andra typer av enheter för databehandling och lagring vara anslutna. Nödvändigt är dock att det finns enheter för inmatning av elektro-
25 niska data till styrenheten 9 och åtminstone en till densamma ansluten skrivare 8. Angående ekonomisystemet 7 kan det betecknas som en funktion inom systemet och behöver ej ses som någon separat maskinell enhet utan kan vara integrerad i det övriga databehandlings-
30 systemet. Funktionen skall i så fall innefatta möjligheter till inmatning av ekonomidata, lagring och bearbetning av dessa samt utmatning av data som är producerade från inmatat material genom databearbetning.

35

Databasen 2 är avsedd att utgöra en serviceenhet, vilken kan utnyttjas av flera delsystem 1 hos

5 företagare och institutioner. Databasen är förbunden med styrenheter hos anslutna delsystem via förbindelser 15, som kan vara en kabelförbindelse eller trådlös förbindelse och företrädesvis en förbindelse via något tillgängligt datanät.

10

Databasen 2 innefattar ett dataregister 16 med en avancerad sökfunktion för sökning och framtagning av data ur en stor mängd lagrade sådana. En kopplingsenhet 17 är ansluten dels till den inkommande förbindelsen 15 från delsystemet 1 och dels till dataregistret 16 och även till utgående förbindelser 18, 19 och 20. Dessutom förutsättes att kopplingsenheten är ansluten till en eller flera datorer 21 med bildskärm och manual för personlig betjäning.

20

Avsändarens delsystem 1 och databasen är avsedda för kommunikation till ett antal mottagare, som i figuren representeras av delsystemet 3. Dessa mottagarsystem kan inbördes ha olika utrustning för mottagande av korrespondens. De olika mottagarenheter, som kan förekomma anges i fig. 1 med följande definitioner: postmottagningsställe 25 för postbefordrad korrespondens, telefax 26, skrivare 27 ansluten till dator för mottagande av e-post samt datalagrings- och databearbetningsenhet 28 för mottagande av data enligt ett särskild adresserings- och aktiveringskodifiering. Olika mottagarsystem kan därvid ha större eller mindre omfattning från det att man för dokumentära, registrerbara meddelanden endast är nåbar med postbefordran till ett omfattande utbyggt system med särskilda adresserings- och aktiveringsfunktioner i enheten 28. Som exempel på sådana funktioner kan nämnas värdetrans-

5 fereringar mellan konton i olika banker där ett
kodifierat fjärrmeddelande utlöser transaktioner med
omkontering och efterföljande bekräftelseoperationer.
Den olika omfattning delsystemen 3 hos respektive
presumtiva mottagare kan ha, är upphovet till den
10 nämnda osäkerhet om vilka distributionsmedel som
användaren kan använda.

Som nämnts är databasen ansluten till styrenheten 9,
vilken i sin tur är ansluten för mottagande av data
15 producerade i användarsystemets datasystem och inrät-
tade för styrning av skrivaren 8. Styrenheten 9 är
därvid anordnat att överföra mottagna data via linjen
15 till databasens 2 kontrollenhet 17 under avbrott av
överföring av dessa data till skrivaren. Överföringen
20 till databasen initierar en sökprocess i register-
enheten 16. Denna är inrättad att söka motsvarighet
till adressatidentifikationer inkluderade i data
förmedlade från styrenheten 9, särskilt namn- och
adressuppgifter, och om dessa ej innehåller relevanta
25 elektroniska adressuppgifter, söka sådana uppgifter.

Den beskrivna processen kan resultera i att antingen
konstateras en relevant elektronisk adress genom att
den framgår av identifikationsdata förmedlade från
30 styrenheten 9 alternativt genom att den framkommit i
sökprocessen eller att några sådana data ej framkommit.
Om elektronisk adress föreligger övertar databasen den
vidare distributionen, vilket således sker elektroniskt
via adresserbart datasystem 28, e-post 27 eller telefax
35 26 i nu angiven prioritetsordning. Kan någon elektro-
nisk adress ej konstateras återföres den mottagan
datamängden till styrenheten 9 och föres vidare till

- 5 skrivaren 8, som aktiveras att skriva ut motsvarande dokument för postbefordran.

Registeruppgifterna i databasen kan hämtas från en mängd media såsom telefonregister, faxregister, e-post-
10 register, myndighetsregister mm, som i allmänhet är åtkomliga i digitaliserad form, ofta via CD-ROM. Så långt som möjligt är varje adress kompletterad med sin/sina adresser för elektronisk kommunikation: Elektronisk adresseringsenhet 28 med dess koder, eller
15 e-postadress resp. telefaxnummer.

Om någon användbar elektronisk adress ej kan konstateras måste distribution till postmottagningsstället 25 således ske från avsändarsystemets skrivare 8 via sedvanlig postbefordringsservice. Med andra ord, korrespondensen ifråga skrives ut medelst skrivaren 8 och postbefordras som brev till mottagaren. Övrig kommunikation till mottagaren, som är elektronisk, sändes som nämnts via databasen 2. Därvid visas telefaxen 26
25 ansluten till databasens kopplingsenhet 17 genom linjen 18 genom skrivaren-datorn 27 genom linjen 19 och till den adresserbara datorsystemet 28 genom linjen 20. Dessa förbindelser kan liksom förbindelsen 15 ske via tråd eller trådlöst och företrädesvis medelst något
30 etablerat datanät.

I funktionen vid den avsedda debiteringsprocessen utgör styrenheten 9 en nyckelenhet för genomförande av förfarandet enligt uppfinningen. Den är ansluten till
35 servern 6 för mottagande av data i sådan form att de kan styra skrivaren 8 för utskrift av dokument. Sådana dokument förutsättes här vara fakturor eller andra

5 betalningsförelägganden, vilka producerats i avsändarens delsystem 1. Sådan produktion kan genomföras på olika sätt: Genom manuell inmatning av data via datorn 4, genom scanning av dokument i scannern 5 och/eller genom att hämtas från ekonomisystemet 7. Källor till
10 data som inlagrats i ekonomisystemet kan vara av olika slag. Nämnas kan leveransnoteringar, arbetsrapporter och inkommande debiteringar från underleverantörer, som i sin tur redan registrerats i inmatningsbar form och kan ha producerats i datorn eller scannern exempelvis.
15 Ytterligare är styrenheten 9 ansluten till skrivaren 8 för framställning av dokumentet i sådan form att de kan postbefordras. Medelst förbindelsen 15 är styrenheten som nämnts ansluten till databasen 2 och dess kopplingsenhet 17.

20

Vid en debiteringsprocess genomföres följande operationer:

Inmatade data från servern till styrenheten 9 vidarebefordras via förbindelsen 15 till databasen 2 under
25 temporärt avbrott av förbindelsen från styrenheten 9 till skrivaren 8. Efter inlagring föres adresseringsdata ingående i den producerade och överförda datamängden till dataregistret 16 för aktivering av dess sökfunktion. De
30 data som finns i registret är namn- och adressuppgifter för den krets av adressater inom det territorium, som ingår i den avtalade servicen via databasen 2. Om vid sökningen någon elektronisk adresseringsmöjlighet finns hos ifrågavarande mottagare, väljes denna ut med
35 prioritering av förbindelse via adresserbar enhet 28 och därefter via e-post samt slutligen telefax. Om någon av dessa möjligheter finns, producerar genom den från

5 styrenheten 9 mottagna datamängden databasen 1 en faktura
för den elektroniska distribution, som har konstaterats.
Nämnda data kompletteras med redan inlagrade data från
avsändaren för utskrivning av en komplett faktura med
avsändarens logotype och annat. Dessutom förutsättes att
10 en text ingår, som informerar om att kommunikationen
motsvarar översändande av en originalfaktura och att
postbefordran ej kommer att ske.

Förutsättning för att denna operation skall kunna åstad-
15 kommas är att vid sökningen återfinnes någon elektronisk
adress för mottagaren ifråga. Eftersom i så fall den
elektroniskt överförda fakturan skall ersätta post-
befordran sörjer styrenheten för att några data ej matas
fram till skrivaren 8 varigenom någon postbefordran ej
20 sker. Skulle dock ej någon elektronisk adress återfinnas
vid sökningen återföres datamängden till styrenheten för
vidarematning till skrivaren 8. Det då utmatade doku-
mentet tas om hand på sedvanligt sätt för postbefordran.
Slutligen avrapporteras från databasen till avsändarens
25 ekonomisystem 7 att fakturan avsänts och vilket kommuni-
kationsmedium som använts.

Detta utnyttjande av förfarandet medelst styrenheten och
databasen har exemplifierats för användning vid debite-
30 ring. Det finns dock ej något som hindrar att det
användes för annan korrespondens, naturligtvis för
följdåtgärder till debiteringar, såsom betalnings-
påminnelser och -krav. Emellertid även annan korre-
spondens komma ifråga där avsändaren ej omedelbart kan
35 konstatera vilka distributionsvägar som finns
tillgängliga och där man föredrar elektronisk överföring
framför postbefordran.

5

Inom uppfinningens ram ligger även att styrenheten 9 kan utvidgas för ytterligare funktioner. En sådan är att den är utrustad för programmering av bestämda funktioner. Det är exempelvis tänkbart att skrivaren 8 endast temporärt användes för en viss funktion, exempelvis fakturering och annars har mera allmän användning. Det är därvid lämpligt att det finns ett program som aktiveras så att nämnda funktion hos styrenheten inkopplas, d v s alternativ produktion av utskrivet meddelande eller elektronisk kommunikation via databasen 2. När detta program ej är aktiverat kan skrivaren ha direkt koppling till servern eller annan enhet i avsändarens delsystem för sedvanlig skrivaranvändning. Om dock nämnda program är inkopplat kan detta även omfatta nämnda kompletterade data för att skapa ett dokument i de fall man fördrar att överföra firmalogotype eller andra uppgifter för utskrivning i skrivaren i stället för att använda sig av förtryckta firmapapper eller blankett. Som nämnts förutsågs att sådana kompletterade data kunde vara inprogrammerade hos databasen men kan likaväl ligga i ett dataprogram för aktivering av skrivaren medelst styrenheten. Aktivering av styrenheten skall även innebära att nämnda rapporteringsfunktion, uppdatering av ekonomisystemet 7 upprätthålles vid fakturering och andra ekonomiåtgärder.

30

Aktivering av de program, som man önskar kunna använda i avsändarens delsystem kan givetvis ske genom inmatning via exempelvis datorn 4 eller genom en manual ansluten direkt till styrenheten. Ett annat sätt är att koppla in en diskett eller CD-ROM, som har ifrågavarande program lagrat. En ytterligare möjlighet, som även förutses, är att förse styrenheten eller en till densamma ansluten

35

5 enhet med en kortläsare. Med hjälp av kort från vilka
 antingen programmet kan avläsas eller aktiveras från ett
 minne, kan den önskade funktionen tillförsäkras genom
 läsning av relevant kort. Korten kan därvid vara tydligt
 märkta så att några misstag ej sker vilket är viktigt
 10 särskilt i ekonomisammanhang. Korten kan även distri-
 bueras till endast behöriga personer, så att missbruk,
 exempelvis falsk debitering kan motverkas.

I fig. 2 visas närmare hur mottagen korrespondens kan
 15 hanteras enligt förfarandet i ett delsystem 35 hos
 mottagaren (mellan och till vänster om de streckprickade
 linjerna). Över den övre streckprickade linjen återfinns
 de distributionssätt 25-28, som angivits i fig. 1 och som
 här symboliserar vägarna för till delsystemet 35 ankom-
 20 mande korrespondens. Under den nedre streckprickade
 linjen återfinns samma distributionssätt 25-28 men
 symboliserar här vägarna för avsänd korrespondens, vilken
 föranledes av respektive ankommande korrespondens. Till
 höger om den punktstreckade, vertikala linjen återfinns
 25 databasen 2. Medelst en ruta inramad med streckprickade
 linjer symboliseras delsystemet 1 för avsänd
 korrespondens. Man kan nämligen förutsätta att hos de
 flesta användare av förfarandet och systemet finns såväl
 behov av att kunna sända och ta emot korrespondens. Här
 30 beskrives skilda system för dessa funktioner men i
 praktiken kan man räkna med att de är integrerade med
 varandra till ett komplett korrespondenssystem, som kan
 betecknas 1,35.

35 De i delsystemet 35 ingående enheterna kan definieras på
 följande sätt: En sorteringsstation 36 till vilken
 postbefordrad korrespondens 25, telefaxmeddelanden 26 och

- 5 e-post 27 föres. Det inkomna materialet sorteras därvid, vilket får antas ske manuellt, i sådant, som skall behandlas av någon befattningshavare, se rutan 37, sådant vars data kan inmatas via exempelvis en dator till en server 38 för inlagring av data för bearbetning internt.
- 10 Sådana data kan exempelvis vara uppgifter från inkommande fakturor, vilka registreras manuellt. Sådana data kan för övrigt inkomma till servern 38 från befattningshavare, ruta 37.
- 15 Elektroniska adresserbara data, ruta 28, förutses inmatas i servern för databehandling direkt utan att gå via sorteringsstationen 36. Som antydes med pilen 40 förutsättes att servern 38 står i förbindelse med delsystemet 1 för produktion och avsändning av korrespondens, jmf. bilden i fig. 1. Det är därvid tänkbart att serverfunktionerna vid 6 och 38 processas och lagras i samma enhet.
- 20

Det hittills beskrivna har avsett den rent interna hanteringen. Om emellertid databasen 2 utnyttjas även för

25 hantering av ankommande data skall sorteringsstationen 36 vara ansluten till databasen 2 direkt eller via en scanner 41. Även adresserbara meddelanden via distributionsvägen 28 föres därvid åtminstone till viss del

30 till databasen 2 för överföring via denna till servern. Även befattningshavare, ruta 37, har förbindelse med databasen direkt eller eventuellt även via en scanner. Databasen 2 är företrädesvis inrättad för sådan databehandling att scannermeddelanden åtminstone i viss

35 utsträckning kan analyseras (OCR-funktion) för framtagning av exempelvis avsändaridentifikation för vidare automatisk databehandling så långt som sådan är

5 möjlig. När sådana data framtagits överföres de till korrespondenssystemet 1,35 för registrering.

För distributionsvägarna för avgående korrespondens, se de nedre rutorna 25-28, gäller vad som angivits i samband
10 med beskrivningen av fig. 1. Därvid förutsättes att liksom vid det tidigare exemplet korrespondens via postbefordran utföres internt inom företaget via av kombinationen av styrenheten 9 och skrivaren 8. Därjämte kan man anta att en telefax 26 finns tillgänglig och
15 dessutom sändningsmöjligheter för e-post 27 och eventuellt även adresserbara överföringsmöjligheter 28. Man kan därvid förvänta sig att befattningshavare, ruta 37, ofta utan att anlita databasen 2, sänder sin korrespondens via någon av de nämnda distributions-
20 vägarna. Om man emellertid önskar utnyttja databasen på det sätt som förut beskrivits för val av distributionsväg, antydes en direkt förbindelse eller förbindelse via scanner med databasen. Även servern 38 förutsättes ha förbindelse och dubbelriktad sådan med databasen 2,
25 lämpligen som i första exemplet via en styrenhet såsom styrenheten 9.

Data kan således inkomma till databasen 2 från olika källor: Från ett system 28 för adressbar elektroniska
30 meddelanden, från sorteringsstationen 36 antingen direkt eller via en scanner, från befattningshavaren, ruta 37 och från servern 38 direkt eller via en styrenhet. Databasens uppgift är därvid att, för data inkommande från sorteringsstationen 36 och/eller befattningshavare
35 eller från servern 38 och då via en styrenhet, genomföra den beskrivna sökningsoperationen och genomföra distributionen på det sätt som beskrivits i samband med fig. 1.

5 Genom förfarandet i systemet enligt uppfinningen vinnes
flera fördelar. Tidigare har påpekats möjligheten att
utnyttja den mest fördelaktiga distributionsvägen på
ett enkelt sätt genom anlitande i en automatisk process
styrd av den separata databasen, bestyckad med sökfunk-
10 tioner för adresser i ett omfattande adressregister.
Denna hantering kan förutses ge impulser till
användarens kontaktnät att övergå till elektronisk
kommunikation varigenom en allt större krets bildas
inom vilken detta rationella kommunikationssätt
15 tillämpas regelmässigt.

Det skall tilläggas att anlitandet av databasen för
distribution, och både den internt initierade och den
genom inkommande korrespondens initierade, kan utgöra
20 en grund för överföring av ytterligare tjänster till
databasen. Genom de kommunikationskanaler som upprättas
kan det vara lämpligt att låta genomföra bokföring
genom databasens organisation, vilket särskilt i mindre
företag kan ge hantering med lägre kostnader, till
25 större säkerhet och med minskat personalbehov än vid
intern sådan ekonomihantering.

Den föregående beskrivningen utgår från att skrivaren 8
för utskrift av dokument, som skall postbefordras, är
30 placerad snarare i anslutning till avsändarsystemet 1
än nära ansluten till databasen 2. Styrenheten 9 kan
därvid verka så att databasen endast tar hand om
elektronisk distribution av den datoriserade informa-
tionen, medan däremot information som skall post-
35 befordras omhändertages av avsändarsystemets skrivare
8, så att ett dokument, vilket kan lämnas till
postbefordran av avsändarsystemet, produceras.

5 Detta kan vara en lämplig utföringsform av
upppfinningen, särskilt om mängden försändelser i
dokumentform via post eller på annat sätt såsom via
kurir är stor, genom att elektronisk adressering ej är
tillämplig. Exempelvis kan förekommande adressater
10 sakna fax eller e-postadress eller kan försändelserna
till stor del gälla originaldokument.

Inom ramen för upppfinningen kan dock systemutförandet
vara sådant, att en eller flera skrivare är anslutna
15 till databasen, så att styrenheten eller annan styr-
funktion ansluten till databasen aktiverar den anslutna
skrivaren för utskrift av de dokument, för vilka efter
sökning i databasens adressregister konstaterats att
någon adress för elektronisk distribution ej kan
20 återfinnas. Dokumentet kan sedan omhändertas för
vidarebefordran som en service inom databasen.

Detta kan vara den lämpligaste utföringsformen när man
inom avsändarsystemet ej önskar hantera några dokument-
25 försändelser.

Givetvis måste data för de dokumentförsändelser, som ej
omhändertas inom användarsystemet rapporteras till
relevant funktionsadress hos detsamma.

5 2000 mars

Ref. WG990209PCT

Patentkrav

1. Förfarande för datorstyrd distribution av information via ett antal olika kommunikationssystem från ett datorbaserat användarsystem (1) inom ett korrespondenssystem (1,35) anordnat för produktion av elektroniska data för styrning av ett antal skrivare (8) genom vilka kan framställas dokument med en till sagda elektroniska data motsvarande information k ä n n e t e c k n a t d ä r a v, att i respektive överföringslinje för sagda elektroniska data till respektive skrivare (8) är anordnat en styrenhet (9) vilken vid aktivering upptar dessa till skrivaren designerade data och överför dem till en för ändamålet inrättad databas (2) under avbrott av förmedling av sagda data till skrivaren (8), varvid i databasen, som är utrustad med ett omfattande dataregister (16) av adresser inkluderande förekommande elektroniska adresser, på grundval av från avsändarsystemet (1) via styrenheten (9) meddelade respektive mottagaridentifikationer framsökes i adressregistret adekvat elektronisk adress där sådan förekommer, varefter informationen meddelas via elektronisk distribution till adressen ifråga, medan vid till databasen överförda data avseende mottagaridentifikationer för vilka någon elektronisk adress ej kan framsökas, sagda data designerade till respektive skrivare (8) överföres till denna för utskrift av dokument, vilket kan postbefordras.

35

2. Förfarande enligt patentkrav 1, k ä n n e t e c k n a t d ä r a v, att databasen (2) i anslutning till sagda distribution till korrespondenssystemet (1,35) överför data avseende

5 informationsöverföringen till korrespondenssystemet
(135) för vidare databehandling.

3. Förfarande enligt patentkrav 1 eller 2,
k ä n n e t e c k n a t d ä r a v, att
10 korrespondenssystemet (1,35) inom ett delsystem (35)
för mottagande av korrespondens genomför utsortering i
den inkommande korrespondensen av för automatisk
databehandling lämpad information och överför den
elektroniskt till databasen (2) för databehandling
15 såsom komplettering med elektroniska adresser framtagna
i dess dataregister (16).

4. Förfarande för datorstyrd distribution av
information via ett antal olika kommunikationssystem
20 från ett datorbaserat avsändarsystem (1) inom ett
korrespondenssystem (1,35) anordnat för produktion av
elektroniska data, vilka är relaterade till sagda
information och från vilka data framställles
informationsbärare för sagda distribution, k ä n n e -
25 t e c k n a t d ä r a v, att sagda data överföres till
en för ändamålet inrättad databas (2), varvid i data-
basen, som är utrustad med ett omfattande dataregister
(16) av adresser inkluderande förekommande elektroniska
adresser, på grundval av från avsändarsystemet (1) via
30 styrenheten (9) meddelade respektive mottagaridenti-
fikationer framsökes i adressregistret adekvat
elektronisk adress där sådan förekommer, varefter
informationen meddelas via elektronisk distribution
till adressen ifråga, medan vid till databasen
35 överförda data avseende mottagaridentifikation för
vilka någon elektronisk adress ej kan framsökas, sagda
data överföres till en skrivare (8) och medelst denna
utskrives dokument, som kan distribueras via post-
befordran.

- 5 5. Förfarande enligt patentkrav 4, k ä n n e t e c k n a t d ä r a v, att databasen (2) i anslutning till sagda distribution överför data avseende informationsöverföringen till korrespondenssystemet (1,35) för vidare databehandling.
- 10 6. Förfarandet enligt patentkrav 4 eller 5, k ä n n e t e c k n a t d ä r a v, att korrespondenssystemet (1,35) inom ett delsystem (35) för mottagande av korrespondensen av för automatisk
- 15 databehandling lämpad information och överför den elektroniskt till databasen (2) för databehandling såsom komplettering med elektroniska adresser framtagna i dess dataregister (16).
- 20 7. System för datordistribution av information via ett antal olika kommunikationssystem under tillämpning av förfarandet enligt något av patentkraven 1-3, k ä n n e t e c k n a t d ä r a v, att dess korrespondenssystem (1,35) innefattar ett databaserat
- 25 avsändarsystem (1), vilket är anordnat för produktion av elektroniska data, ett antal skrivare (8) anordnade för framställning av dokument med en till sagda elektroniska data motsvarande information, en styrenhet (9) anordnad i respektive överföringslinje för sagda
- 30 elektroniska data till sagda skrivare (8), en databas (2) utrustad med ett omfattande dataregister (16) av adresser, varvid styrenheten (9) är anordnad att vid aktivering uppta till skrivaren designerade data och överföra dem till databasen under avbrott av förmedling
- 35 av sagda data till skrivaren, med databasen inrättad att vid mottagande av sagda data i adressregistret framsöka adekvat elektronisk adress där sådan förekommer och att meddela informationen via elektronisk distribution till adressen ifråga, medan vid till

5 databasen överförda data avseende mottagaridenti-
fikationer för vilka någon elektronisk adress ej kan
framsökas, databasen är inrättad att överföra till
respektive skrivare förut nämnda data för utskrift av
dokument, vilket kan postbefordras.

10 8. System enligt patentkrav 7, k ä n n e t e c k-
n a t d ä r a v, att korrespondenssystemet (1,35)
innefattar ett delsystem (35) för mottagande av
korrespondens, vilket innefattar en sorteringsstation
15 (36) anordnad för mottagande av korrespondens via
förekommande distributionskanaler (25,26,27,28) och för
utsortering av sådan korrespondens för vilken
automatisk databehandling kan komma ifråga såsom
komplettering med elektronisk adress. Och anordnad med
20 en datalinje för överföring till databasen (2) av data
gällande sådan korrespondens för vidare databehandling
samt återsändande till korrespondenssystemet (1,35) för
registrering och vidare behandling.

25 9. System för distribution av information via ett
antal olika kommunikationssystem under tillämpning av
förfarandet enligt något av patentkraven 4-6, k ä n n e-
t e c k n a t d ä r a v, att dess korrespondenssystem
(1,35) innefattar ett datorbaserat avsändarsystem (1),
30 vilket är anordnat för produktion av elektroniska data,
vilka är relaterade till sagda information och från
vilka data framställs informationsbärare för sagda
distribution, en databas (2) utrustad med ett omfattande
dataregister (16) av adresser inkluderande förekommande
35 elektroniska adresser, åtminstone en till databasen (2)
kopplad skrivare (8) för dokument, med databasen
inrättad att mottaga sagda data och därvid i adress-
registret framsöka adekvat elektronisk adress där sådan
förekommer och att meddela informationen via elektronisk

5 distribution till adressen ifråga, medan vid till data-
basen överförda data avseende mottagaridentifikationer
för vilka någon elektronisk adress ej kan framsökas,
databasen är inrättad att överföra till sagda skrivare
10 (8) förut nämnda data för utskrift av dokument, som kan
distribueras via postbefordran.

10. System enligt patentkrav 9, k ä n n e -
t e c k n a t d ä r a v, att korrespondenssystemet
(1,35) innefattar ett delsystem (35) för mottagande av
15 korrespondens, vilket innefattar en sorteringsstation
(36) anordnad för mottagande av korrespondens via
förekommande distributionskanaler (25,26,27,28) och för
utsortering av sådan korrespondens för vilken
automatisk databehandling kan komma ifråga såsom
20 komplettering ,med elektronisk adress, och anordnad med
en datalinje för överföring till databasen (2) av data
gällande sådan korrespondens för vidare databehandling
samt översändande till korrespondenssystemet (1,35) för
registrering och vidare behandling.

25

30

5 Sammandrag

Förfarande och system för datorstyrd distribution av information via ett antal olika kommunikationssystem från ett datorbaserat avsändarsystem (1) inom ett

10 korrespondenssystem anordnat för produktion av elektroniska data för styrning av ett antal skrivare (8). I respektive överföringslinje för sagda elektroniska till skrivaren (8) är anordnat en styrenhet (9). Vid aktivering upptar styrenheten till

15 skrivaren designerade data och överför dem till en för ändamålet inrättad databas (2) under avbrott av förmedling till skrivaren (8). Databasen är utrustad med ett omfattande dataregister (16) av adresser inkluderande förekommande elektroniska adresser. På

20 grundval av från avsändarsystemet (1) via styrenheten (9) meddelade respektive mottagaridentifikationer framsökes i adressregistret adekvat elektronisk adress där sådan förekommer, varefter informationen meddelas via elektronisk distribution till adressen ifråga. Vid

25 till databasen överförda mottagaridentifikationer för vilka någon elektronisk adress ej kan framsökas sker överföring av sagda data till respektive skrivare (8) för utskrift av dokument, vilket kan postbefordras.

30

Fig. 1

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☒ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☒ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER: _____**

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.